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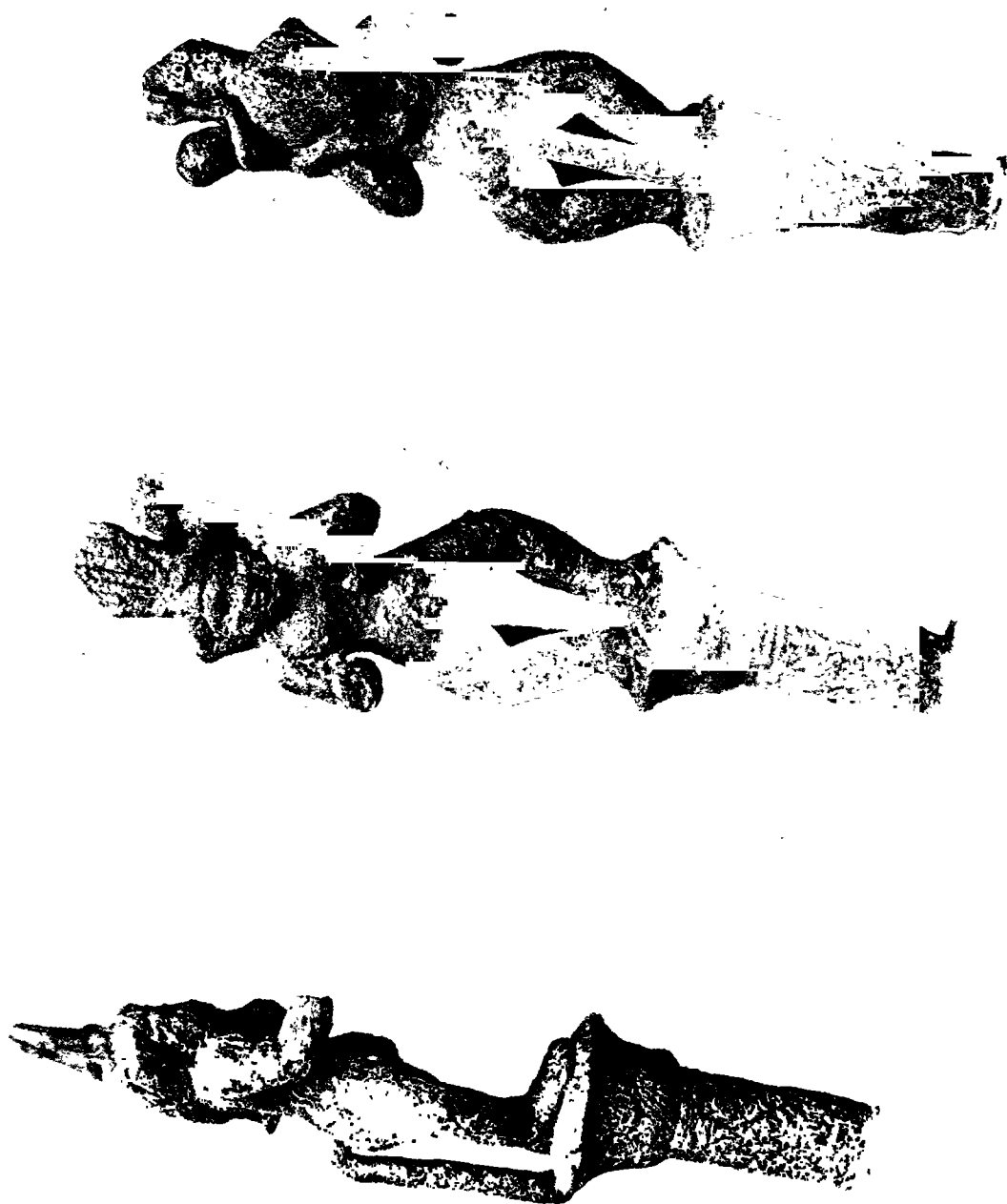
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Bronze figure of Bes carrying a child
British Museum, No. 61,206.
Scale 1/2.

AN EGYPTIAN ST. CHRISTOPHER

By H. R. HALL

With Plate i.

This curious bronze figure in the British Museum (No. 61206) represents the god Bes carrying on his shoulders a child. It formed the top of a staff or sceptre, with a papyrus-head, on which the figure stands. The god, bow-legged and tailed, is naked and feather-crowned; he does not appear to have or to have had a beard: his chevelure is thick and full. His right arm (broken off from above the wrist) is bent; with the left hand he grasps the left leg of the child, short-haired and evidently a boy, who sits astride his shoulders, facing inwards, holding on to the god's head-dress with both hands, the right reaching at the back to the top of the feathers while the left holds the base of the head-dress. From the condition of the bronze it is impossible to say whether his head bore the sidelock or not, but that the child is Horus (Harpokrates) I think is hardly doubtful. Bes is acting as his *παιδαγωγός*. We have here then a very curious iconographic parallel in ancient Egypt with the Christopher-figure of our mediaeval churches.

The figure is probably of early Roman age, but may be earlier. The beardlessness of the god, if this is a fact, and the beard has not been broken off, might be an argument in favour of an earlier date, though the British Museum has a beardless Bes of fayence that is not older than the Ptolemaic period. That it is not possible to say definitely that a beard did not originally exist is due to the condition of the bronze, which had probably been burnt and is badly corroded. It has been most successfully cleaned in the British Museum Laboratory, for until a year or so ago it was merely a mass of oxide, from which no intelligible group could have been surmised. The object has been in the Museum probably for over a century, but its nature was unrecognizable until after it had been cleaned. Its provenance is unknown.


SOME NOTES ON MATERIAL FOR THE REIGN OF AMENOPHIS III

By S. R. K. GLANVILLE

With Plates ii—iv.

I. Fragment of a statue of Amenophis, son of Hapu.

The lower part of a black granite figure, B.M. 103¹, is so poor a shadow of its former self that it has not attracted the small attention it deserves (Pl. ii, fig. 2). Ninety years ago, when the now familiar squatting type of statue was scarcely represented in museums, this fragment was considered worthy of inclusion (with an engraved plate) in one² of a series of volumes called *The Library of Entertaining Knowledge* "published under the superintendence of the Society for the Diffusion of Useful Knowledge." To the anonymous compiler of this book the interest of the object lay in a comparison of the figure's posture with the "oriental" (more strictly, Mongolian) fashion of sitting, and especially with a figure in a drawing of the caves of Kinnesi by Daniell. He is not concerned to remark on the hieroglyphic inscriptions which cover the figure, although these are "unrolled" in his accompanying illustration³. Though the majority of the signs are there recognisable, this is not an adequate publication of the object.

The statue in its original state was that of a scribe squatting in the familiar cross-legged position, wearing a skirt reaching to his knees. An oval writing palette with two ink wells rests on his left thigh, and a cord by which to attach the palette (when not in use) to his person hangs down over the thigh. On his lap he holds a half-opened papyrus roll, part of which is still unrolled in his left hand. The text inscribed on the open part of the roll is written for convenient reading by the statue rather than by the Egyptologist, for whom, as he faces the figure, the signs are upside-down. The text starts, not at the beginning of the roll, held in the right hand, but at the extreme edge of the skirt where it joins the plinth under the right leg. It ends, more properly, when it reaches the unrolled portion of the papyrus. The figure squats on a plinth which is semi-elliptical in shape⁴, the back being curved. Round the sides of the plinth run two short inscriptions which share as their initial group the signs (read →)  in the centre of the front of the plinth. On top, and in front of the figure, is another short line of inscription. The statue was of excellent workmanship, as the fine modelling of the exposed parts of the legs still shows.

¹ Budge, *Guide to the Egyptian Galleries (Sculpture)*, 154, no. 555.

² *The British Museum; Egyptian Antiquities* (Charles Knight; London, 1836), II, 30, 31.

³ *Op. cit.*, 31.

⁴ The plinth is 1 ft. 9½ ins. wide and 1 ft. 11¾ ins. deep; the total height of the object today is 1 ft. 1¼ ins. Nothing is known as to its provenance.



1



2



3

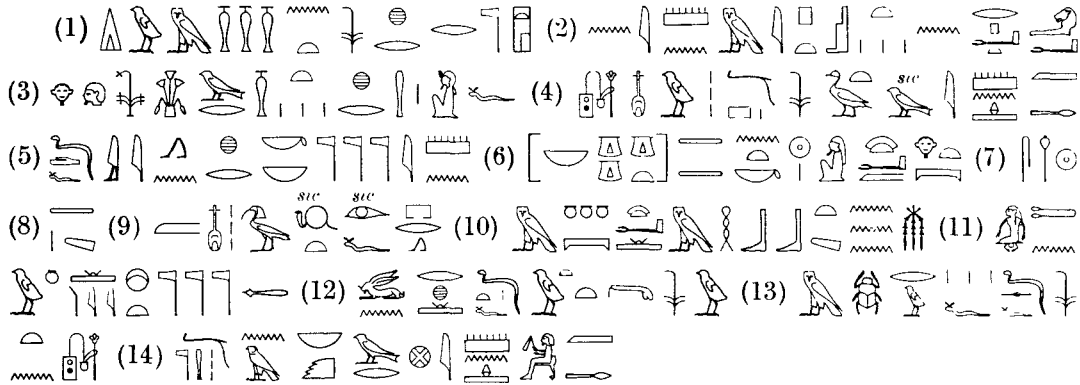


4

- 1 Sandstone ape, B.M. 38 Height 26½ inches.
- 2 Fragment of a statue of Amenophis son of Hapu. B.M. 103. Width 21½ inches
- 3 Fayence ring of Amenophis III. Scale c. 1
- 4 Inscribed lid of a box B.M. 38,272 Length 11½ inches

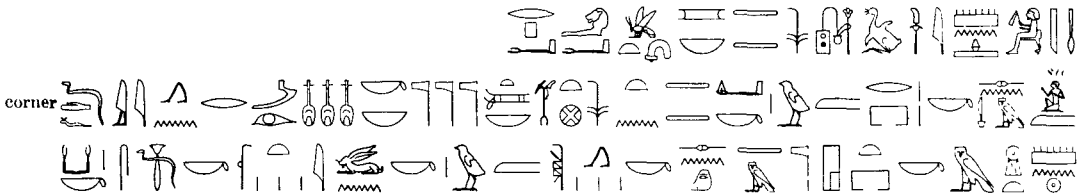
The following inscriptions on the statue survive¹:

1. Across the lap and papyrus-roll, in vertical columns between lines, reading from right to left.

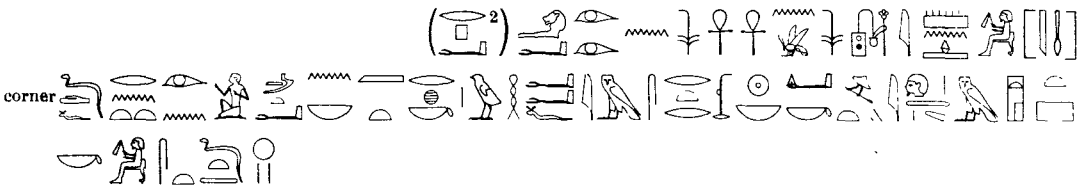


2. Round the plinth, starting in the centre of the front, two separate texts, meeting at the centre of the back.

(a) Reading from right to left:



(b) Reading from left to right:



3. On top of plinth, in front of the figure; from right to left.



TRANSLATION.

1. *Placed as a favour from the King in the temple of Amūn in Karnak, for the Hereditary Prince and Count, Chief of Upper and Lower Egypt, great in the favour of his majesty, the Scribe of the Recruits, the Steward of the Eldest Princess, Amenophis, justified. He says: I have come to thee, Lord of the Gods, Amūn [Lord of] Karnak; for thou art*

¹ Probably no inscriptions are lost, except possibly a line of text down the front of the body.

² Actually written from right to left as part of 2(a), but doubtless to be read as well at the beginning of this one.

Rē who appeareth in the heavens, who illumines the land with the beauties of his (sic) fiery eye, who came¹ forth from Nenu, who appeared from water, who did create every great Ennead of the Gods, who² knew his own body, who hath created himself in his very own forms.—The Royal Scribe, Overseer of the Prophets of Horus Lord of Athribis, Amenophis, justified.

2 (a). *The Hereditary Prince and Count, Treasurer of the King of Lower Egypt, beloved of the Lord of the Two Lands, the Royal Scribe and Fanbearer, Amenophis, justified. He says: I have come to see thy beauties, Lord of the Gods, Atum lord of Thebes, King of the Two Lands. Mayest thou place me in thy temple that I may be nourished with thy Ka; that thou mayest keep green my years when I shall be in thy following, that I may worship in thy divine house throughout every day.*

2 (b). *(The Hereditary Prince) and Count, the two eyes of the King of Upper Egypt, the two ears of the King of Lower Egypt, the Royal Scribe, Amenophis, justified. He speaks as follows: I daily performed truth for the Lord of Truth, knowing that he rejoiced therein; that thou³ mightest place my living statue in thy noble house for ever and ever.*

3. *May there be satisfaction from offerings daily at the festivals of Amūn in Karnak for the Ka of the Royal Scribe, Amenophis, justified.*

A comparison of the titles⁴ cited in these inscriptions with those on the other contemporary monuments of Amenophis son of Hapu leaves no doubt that the B.M. figure was another statue of that famous courtier of Amenophis III. Indeed, judging from what remains, it was probably an exact replica, apart from the inscriptions, of the two seated figures found by Legrain at the foot of the pylon of Horemheb at Karnak⁵. Moreover, from the opening words of inscription 1—cf. 2 (b)—it is clear that our statue belongs to the series, now in the Cairo Museum, which the King gave to him (probably over a number of years)⁶ and had placed in the Temple of Amūn at Karnak⁷. The language of the inscriptions is interesting for its conciseness—e.g. the omission of the name (Sitamen) after 𓂏𓂛𓂏 (1, l. 4), and of the determinative after *hnty*, 2 (b)—in contrast to the fuller spellings and lengthy phrases of the three better-known statues from Karnak⁸, and for the unusual writing of the 1st pers. sing. of the Old Perfective 𓂏𓂛𓂏 in 2 (a), *wn-kwi* and 2 (b) *rh-kwi*⁹. But there is little new information to be won from the contents. The title 𓂏𓂛𓂏 does not occur elsewhere in connexion with Amenophis, and may here indicate a final stage in his official career. On the other hand we should then expect him to recall his position as Minister of Public Works which he acquired

¹ The change from the 2nd to the 3rd person seems to be sustained throughout the rest of the passage.

² Taking *wn* as the participle, equivalent to the relative adjective, and followed by the old perfective; see Gardiner, *Eg. Gram.*, § 396 *passim*, and especially 2.

³ = "the Lord of Truth," i.e. the King (see, above, the opening words of the first inscription).

⁴ The three most distinguishing titles are "Scribe of the recruits," "Steward of the Eldest Princess (Sitamen)" and "Overseer of the Prophets of Horus Lord of Athribis." Cf. the statue, Cairo 36498, recently published by Newberry, *Ann. Serv.*, xxviii, 141.

⁵ *Ann. Serv.*, xiv, 17 ff. and Pls. i to iii. One of these, the first to be described by Legrain, omits, as does the B.M. fragment, any mention of the filiation of Amenophis.

⁶ Cf. the difference in the ages of the faces of the Karnak examples, and the variation in titles.

⁷ See Breasted, *Ancient Records*, II, 371 ff.

⁸ (1) *Ann. Serv.*, II, 283 ff.; (2) *Rec. de trav.*, xix, 13, 14; (3) Brugsch, *Thes.*, 1292–8. (1) is the famous work of art portraying Amenophis as an old man.

⁹ Cf. the writing 𓂏𓂛𓂏 for the 1st pers. sing. of the dep. pronoun in 2 (a) above *di-k wi*, and in the text from the statues found at the foot of the Horemheb pylon (*Ann. Serv.*, xiv, 18 ff.).

fairly late in life. He was never actually Vizier, for his contemporary namesake from Bubastis, who was a witness at the publication of his mortuary chapel edict in year 31 of Amenophis III¹, was still in office in year 35²; and as Ramōse held the office for a short time before Akhenaten came to the throne, there can hardly have been an interval between these two. The inscription 2 (b) contains a hint which, to my mind, gives the object its greatest interest. The phrase "I performed truth" is fairly common as an expression of self-praise³. But qualified as it is here, by the addition of the words "for the Lord of Truth," it has a particular point, for it is a reference to Amenophis III's two names Nebmaʿatrē and Khaemmaʿat. Moreover the statement that this performance of truth for the sake of truth (because he knew it pleased the King) earned him his statue in the Karnak temple, clearly implies that the stressing of phrases exalting truth for which Amenophis III's reign is remarkable was the direct result of some personal intention in the King. This is a point of considerable importance in the collection of evidence by which to appraise the value of Amenophis III's contribution towards his son's religious standpoint. Much attention has been given to the phrase "living in (on) Truth" in Akhenaten's titulary, and too little to the much more prominent *m3t*-titles and -phrases under Amenophis III. The connexion between the two groups is, I believe, a very important one⁴.

II. Inscribed panel from a box.

B.M. 38272 is a thin piece of ebony 11 $\frac{3}{4}$ ins. long and 2 $\frac{3}{8}$ ins. wide, with two lines of hieroglyphs (Pl. ii, fig. 4), of which a translation follows:

An offering which the King gives to Amonresōnthēr, Lord of Heaven, Prince of Thebes, Lord of Eternity, Prince (sic); that he may grant food offerings when they are offered up on the altar of the Lord of the Gods. and obeisance; (may he grant) a garland, and that which comes forth in the Great Place, (with) my body flourishing in the companionship of its Ka; for the Ka of the Scribe of the Treasury of the Temple of the Aten, Penbug.

The object was probably the panel of a box. It was pierced with at least nine circular holes, three of which are still stopped with plugs⁵. Its interest lies in the dedication of a *hṫp-dī-nsw* prayer to Amonresōnthēr by an official of a temple of the Aten. The character of the writing indicates the latter end of the Eighteenth Dynasty as the date of the object. But it is improbable that at Thebes, which was its provenance, judging from the phraseology of the dedication, the worship of the Aten would be tolerated after the surrender of Tutankhamūn to the Amenist priesthood. Nor on the other hand would an adherent of the Aten have been found addressing his prayers to Amūn under Akhenaten. So that we may fairly certainly place the inscription in the reign of Amenophis III. It thus becomes another item to add to the evidence collected by Wolf, *Zeitschr. f. äg. Spr.*, LIX, 109 ff. for the cult of the Aten under Amenophis III. The associa-

¹ B.M. stele 138 = Breasted, *op. cit.*, II, 377.

² *Ann. Serv.*, IV, 198.

³ Amenophis himself uses it twice elsewhere, Breasted, *op. cit.*, 377; *Ann. Serv.*, II, 284, l. 4 ("I was praised of those who perform truth").

⁴ Another example of the phrase from Amenophis III's reign occurs in the long inscription on a figure from Memphis (Gardiner in Petrie, *Memphis V*, 33, Pl. LXXIV, 11) *ḫr-nṯ m3t ḫr-nṯ Rḫ ḫr-nṯ ḫy-kwṯ ḫny-f ḫm-s*. Cf. in the next reign from the tomb of Tutu at El-Amarnah, "I speak truth to his Majesty, knowing that he lives thereon" (Davies, *Rock Tombs of El-Amarnah*, VI, Pl. xv, 7. I owe the reference to Frankfurt. Akhenaten clearly borrowed this conception of *m3t* from his father.

⁵ Owing to the whitening applied for the sake of the photograph, one of the plugs has the effect of placing a round object on the top of the wine-jar in the sign for *hwt*.

tion of Amūn and Aten in the same text is not unknown for this reign, as *e.g.* in the stele of the two Clerks of the Works, Hor and Suti, B.M. 826¹.

I take the opportunity of publishing photographs (I believe for the first time) of two objects from this reign, both worthy to represent its best art in their respective genres (Pl. ii, fig. 1, and Pl. iii).

III. Seated figure of an ape in crystalline sandstone.

It will be seen at once from the photograph (Pl. ii, fig. 1) that this is an extremely good piece of sculpture in a hard stone. The "feathering" of the hood in very low relief and the hairs on the face are finely executed; but the sculptor's triumph was the extremely life-like modelling of the haunches. The animal sits, fore-paws on knees, on a semi-elliptical plinth. A portion of the left ear has been broken off in antiquity and a piece, now lost, was mortised on in its place. The snout is also broken, but, from the appearance of the fracture, in more recent times².

On the plinth, in front of the ape and between his paws, is the following inscription in a square frame, the top edge of which is made in the form of an elongated \equiv (Fig. 1). "The good God Nebmafrē, Son of the Sun, Amenophis, given life for ever, beloved of Him-who-smites-the-face-of-him-who-smites-thy-face." I do not know of any other occurrence of this name, which is very possibly that of the ape himself as protector (which is what the meaning of the name amounts to) of Thoth.

The figure may be compared both in style and function with the stone and wood group in Berlin of the scribe Thai reading from a papyrus roll in front of an ape seated on a pyloniform pedestal³. The general treatment of the two apes is the same. But the comparatively small size of the Berlin group did not allow of such a detailed rendering of the feathering of the hood as in the British Museum example.

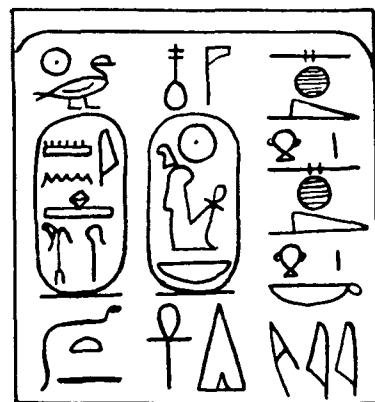




Fig. 1.

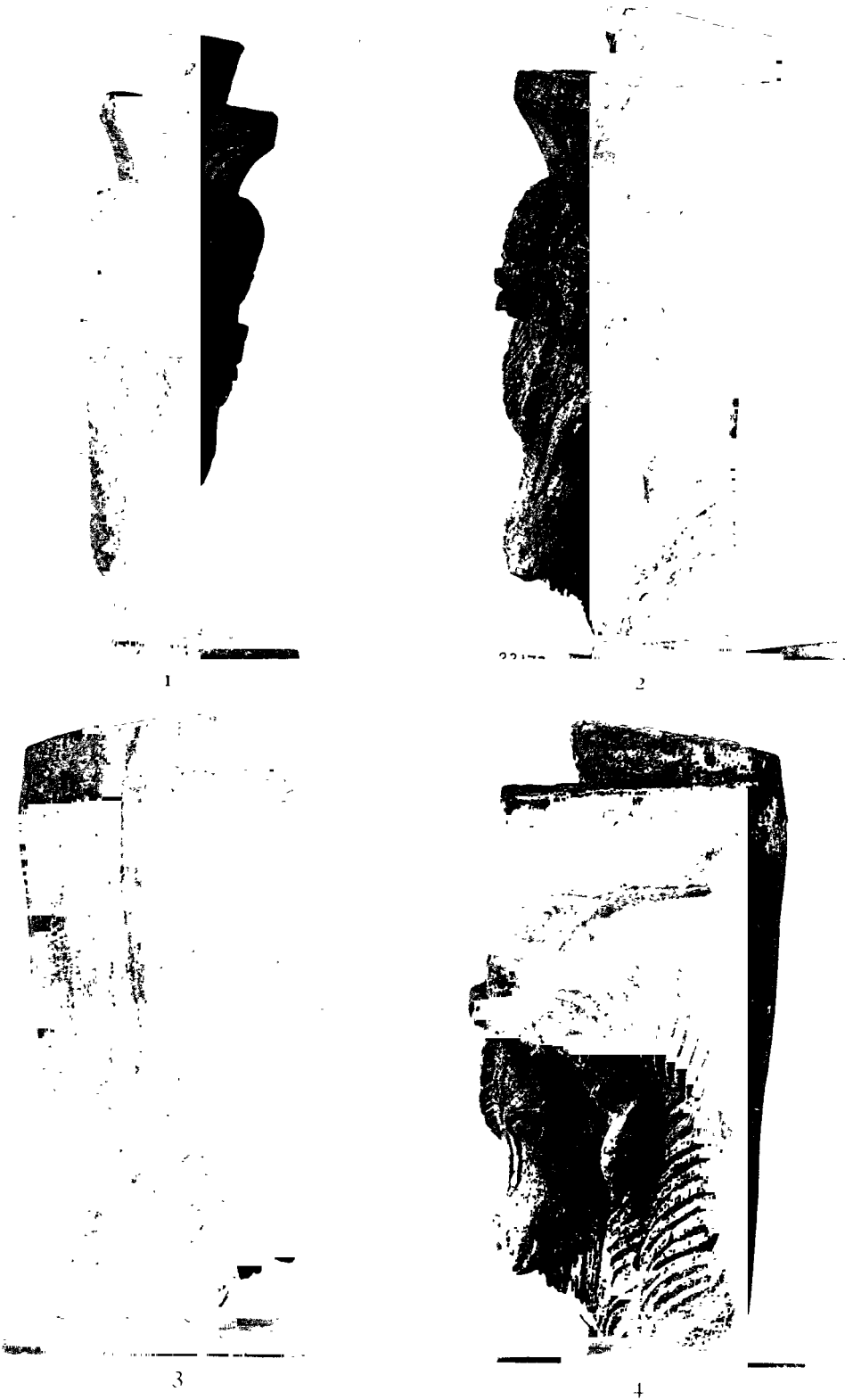
IV. Wooden head of a goat.

The exquisite piece of wood-carving, B.M. 23173 (Pl. iii), must undoubtedly be dated to the "Amarnah" period of Egyptian art in its widest sense, *i.e.* as including the reigns

¹ Budge, *Guide to the Egyptian Galleries*, Pl. xx. The ostrakon B.M. 5627 ([Birch], *Inscriptions in the Hieratic and Demotic Character*, XIII) is not valid as evidence. On it a priest of Ptahsocharis in a temple of Amenophis writes to a priest of Sekhmet, giving instructions concerning offerings to be made to a number of gods, including (recto 5) "Amūn who is in his Aten" (the word *itn* being determined with the god-sign after the disk). Were it a contemporary record of Amenophis III as I originally thought (even if only a model letter), it would be of paramount importance in this connexion; but Dr. Gardiner considers the writing to be Ramesside, in which case its value as evidence for pre-Akhenaten times disappears. I am however indebted to Dr. Gardiner for showing me his notes (and giving me leave to quote from them) on the inscriptions from Tomb 46 at Qurnah. The owner was a certain Ramōse who was both chief priest of Amūn in *Mn-st*, and a steward (*m-r pr*)  (or *Δ?*) . The tomb is dated, with a query, by Gardiner and Weigall, to the reign of Amenophis III, to which conclusion the considerations above affecting Penbury's inscription would also lead.

² Its number is B.M. 38; Budge, *op. cit.*, 120. An engraving is given by Bonomi and Arundale, *Gallery of Antiquities, etc.*, Pl. 25, fig. 90, with a description. Total height 2 ft. 2½ ins. Plinth 1 ft. 4¾ ins. long by 1 ft. 2½ ins. wide.

³ Schaefer-Andrae, *Die Kunst des alten Orients*, 329.



Head of a Barbary goat in wood B M 23.173 Height 5¼ inches.

immediately preceding and following that of Akhenaten¹. It represents the head of a goat², surmounted by the capital of a column. As the total height is only $5\frac{3}{4}$ ins. the object cannot have been part of a building, but the proportions of the capital would admirably suit a piece of furniture. It is in fact safe to assert that it was the top either of the arm of a chair, or of a support belonging to a small shrine, such as was used to contain statuettes of the gods, or small stelae.

The details of the animal's head are sufficiently clear in the photographs to need no description. They suggest that the artist was working from a living model³. A chaplet of flowers—their exact nature is not recognisable—is fastened round its forehead. In carving the head and capital the craftsman left a stout tenon to fit into the arm of the chair or cornice of the shrine—whichever in fact it was. The object as it now stands has been split off from a larger piece of wood, and the line of the major split has followed the course of the heart (see Pl. iii, fig. 3). Since the wood nearest the centre of a branch is the closest-grained, and therefore the toughest, and becomes less tough the farther it grows from the heart, the splitting of the head along this line has resulted in the gradual warping of the wood *in one direction all the time*. The object is thus distinctly out of the straight (Pl. iii, fig. 1); but this is the lesser of two evils—the alternative in the case of an object in which the wood is equally disposed around the heart being lateral cracks through warping, which completely spoil the effect of the surface working. Our carving was only meant to be seen from the front, as the conventional papyrus design of the capital is carved on that side only (Pl. iii, fig. 2).

V. Fayence ring of Amenophis III.

The fayence ring⁴ on Pl. ii, fig. 3, is one of the finest of its type. It measures $1\frac{1}{8}$ ins. in diameter and is of a light but slightly greenish-blue colour—the glaze clearly belonging to the late Eighteenth Dynasty. From the artistic point of view it is worthy of attention. Archaeologically it is equally interesting. The cartouche can be nothing but a fanciful writing of Amenophis III's name *Nebmaʿatrē*. There is evidence for the reading of *ꜥ* as simply *R* in a pendant from the tomb of Tutankhamūn in which three *Nb-ḥprw-ꜥ* cartouches of that king are arranged side by side in a design of which the central idea is a highly decorative *ḥpr*-sign⁵. In the middle of the three cartouches the crescent and lunar orb are substituted in electrum for the gold sun-disks of the other two. The inclusion of the ape of Thoth in the cartouche is common on scarabs of Amenophis III,

¹ I hope soon to collect the evidence for the fact that the use of the *Cervidae* and *Capridae*, etc., as *decorative motifs pure and simple* in Ancient Egyptian art, is largely confined to this period, in which it plays a prominent part. The obvious explanation, namely that these animals were more familiar to the Egyptians of this period than to their predecessors or successors, is ruled out of court by the testimony of the monuments, which show that the native Egyptian fauna became less varied in proportion to the advance of human civilisation, and that these very species were more plentiful and more diversely represented in the earliest times, being domesticated as well as hunted in the Old Kingdom. The true explanation lies farther afield and has been hinted at by Frankfort, *Journal*, XII, 86, n. 1.

² I am informed by Captain J. G. Dollman of the Natural History Museum that it is impossible to say whether it is a wild or domesticated variety.

³ Such as might be found in the stalls of the so-called North Palace at Tell el-'Amarnah described by Newton, *Journal*, x, 296, and definitely considered by Whittemore, *Journal*, XII, 5, to be part of a zoological garden.

⁴ Recently acquired by the British Museum, No. 53906. I am indebted to Dr. Hall for permission to publish it. It was bought in Egypt with some other jewellery on the advice of Greville Chester and W. J. Loftie in the spring of 1891.

⁵ Carter, *Tomb of Tut-ankhamen*, II, Pl. lxxxiv, c.

more especially in the writing of the name *Nb-mꜣꜣt-ꜣ*¹, and may easily be explained by that animal's close connexion with Maꜣat, *e.g.* in the common representation of him with the feather of Maꜣat on the top of the balance in the Judgment scene from the Book of the Dead, and by the more general but still closer connexion of Thoth himself with Maꜣat.

The ape in his turn explains the presence of the moon's instead of the usual sun's disk. The artist felt the need of the proper emblem of Thoth's Ape—the moon's disk and crescent worn on the head. At the same time, to ensure that this disk and crescent should be read separately and not taken as part of the ape (which itself was not read, being solely a garnishing to the feather), he separated them by a straight line. (This perhaps served a secondary function by suggesting the flattening of the ape's head noticeable in bronze and fayence figures wearing the disk and crescent.) We may now reconstruct the designer's intention thus: starting with the simple cartouche he decided to embellish it where possible, as the object for decoration was to be considerably above the average run of fayence rings. He began on the medial sign, the feather of Maꜣat (as Tutankhamūn's jewellers later began with the central “kheper” in their patron's name), and the clearly connected ape of Thoth suggested itself; to complete the ape the disk and crescent should be added above; but a disk (for *ꜣ*) had to be there in any case, so this was made acceptable to the ape by the addition of a crescent; finally to prevent confusion the transformed disk must be separated from the ape by a line. A well-marked “neb” fills the bottom of the oval cartouche.

It would appear that by the time of Tutankhamūn, ☉ had become a stock writing for ☉ in elaborate cartouches, since there is no explanation possible on the lines of the Amenophis ring for the writing of *Nb-ḥꜣꜣꜣ-ꜣ* with ☉ for ☉ in the pendant referred to above. It is indeed probable that Tutankhamūn's device was a conscious imitation of the one initiated by Amenophis III. Have we here another small piece of evidence for calling Amenophis the father of Tutankhamūn²?

¹ See Hall, *Cat. of Scarabs, etc.*, nos. 1881, 1882, 1883, and others.

² Professor Newberry (*Journal*, xiv, 85) notes the assumption by Brunton and Engelbach in *Gurob* as an accepted fact that this was the relationship between the two kings, but clearly is not convinced thereof himself. It is worth while to notice some of the possible grounds for the assumption. (1) The only written evidence known to me is Tutankhamūn's own statement on one of the Soleb lions (B.M. 34), “I restored the monuments of my father, King etc. Amenophis (III).” It is always possible that an Egyptian may be using the term father for forefather, but one is not justified in assuming that he is doing so till one has good reason to suppose that the person referred to as his father is not actually his father. (2) Abundant archaeological evidence shows an unusually developed love of the chase in both kings. (3) The substitution of ☉ for ☉, apparently an innovation of Amenophis's designers, unrecorded (though we might expect it) from the reign of Akhenaten, appears again with Tutankhamūn. (4) The physical resemblance in the faces of Amenophis and Tutankhamūn is in my opinion very marked—far more so than is that between Amenophis and Akhenaten, the former's acknowledged son—as is well illustrated by a comparison of the profiles on Pl. iv. (5) Finally the discovery in the Tomb of Tutankhamūn of carefully preserved relics of Amenophis III and Teie (*Illustrated London News*, July 7, 1928, pp. 6, 7: a lock of the Queen's hair, and a gold statuette of the King, for suspension round the neck) point decisively to the young king's filiation with these monarchs. As Dr. Hall has shown (*Journal*, xiv, 77), there are no chronological difficulties in the way of this assumption, which he stated as early as 1913 in his *Ancient History of the Near East*; and from some notes written long before the discovery of the tomb, from which he has generously allowed us to quote, it is clear that Mr. Engelbach had come to the same conclusion, by arguing that since Akhenaten had no son, and there is no noble at El-Amarnah who appears to have married a daughter of the king, the only solution can be that Tutankhamūn was a brother of Akhenaten called to carry on the Atenist succession in default of a reliable champion of the new cult among the nobles.



1



2



3

1. Gold mask of Tutankhamūn (From *The Tomb of Tutankhamen*, II, Pl. lxxiii, by courtesy of Dr. Howard Carter and Messrs. Cassell & Co.)
2. Cast of a head of Amenophis III as a young man (Berlin.)
3. Head of a colossal statue of Amenophis III in the British Museum

PTOLEMY II AND ARABIA¹

BY W. W. TARN

The relations of Arabia with the Greek world have been the sport of some strange guesswork²; and Glaser's wise suggestion that the proper interpretation of the Greek evidence is no less important than that of the Arabian inscriptions can hardly be said as yet to have been fully carried out³. This paper is partly a voyage of exploration; but though I am aware that it can never be satisfactory to work with translations, as I have had to do with the Arabian inscriptions, still I hope to be able to take the matter far enough to induce some Arabian scholar either to carry it farther or replace it by something better.

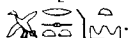
I start from a passage in the stele from Pithom⁴ (Heroopolis) of the reign of Ptolemy II, which has also been the subject of some strange interpretations. After Ptolemy in his sixth year had cleaned out the old canal joining the Nile and the Red Sea, it is stated that he went to a place called Teshi (*i.e.* T-sh-y-t, final *t* silent and vowels unknown) "to the end of the South as far as the land of Parsetet," *i.e.* Persia⁵, and found the gods of Egypt, whom he brought back⁶. It has been supposed that this relates to an expedition to the Persian Gulf⁷; this is out of the question. Not only would it contradict the whole course of Ptolemaic development, but there is definite evidence that the entire south-eastern part of Arabia was unknown to the Greek world, at any rate prior to the first century B.C. Knowledge from the western side never went beyond the Mahra coast, and even so it was merely hearsay for what lay east of Saba; knowledge from the eastern side never extended south of the promontory of Ras

¹ I desire to thank Mr. Sidney Smith for much help with this paper; besides discussing the subject with me, he kindly read the paper in MS. and has supplied Appendix I and several notes (in square brackets and marked S. S.). I also wish to thank Mr. S. R. K. Glanville and Mr. A. W. Lawrence for their help in the matter of the Hereibeh statue, and Mr. Glanville also for kindly translating for me part of the Pithom stele.—My map "Hellenistic Egypt" in *Camb. Anc. Hist.*, vol. VII may assist the reader.

² For example, E. Glaser's treatment of the Greek colonies in ch. XII of his *Skizze der Geschichte und Geographie Arabiens*, II, 1890; and Fr. Hommel, *Ethnologie und Geographie des alten Orients* (Müller's *Handbuch*, III, 1, 1), 1926, 734-5.

³ Glaser, *op. cit.*, 159. Naturally Tkač's fine article *Saba* in *P. W.*, 1920, only touches incidentally on the subject of this paper.

⁴ K. Sethe, *Urkunden des ägyptischen Altertums*, II, no. 20. Translation (partly paraphrase) in Sir E. A. W. Budge, *A History of Egypt*, VII, 201.

⁵ [This equivalence is based on variant hieroglyphic spellings. The Pithom stele has the form . For variants see Budge, *Egyptian hieroglyphic dictionary*, 992a. S. S.]

⁶ Nothing turns on these gods, as bringing back gods was common form for every Ptolemy (see for Ptolemy I the Satrap stele; for Ptolemy III the Canopus decree; for Ptolemy IV the new trilingual stele); even the king ?πασι φίλος of the Potter's Oracle is to bring back gods. Any neighbouring Arab tribe might have carried off a god or two.

⁷ *E.g.*, U. Köhler in *S. B. Berlin*, 1895, 967; C. F. Lehmann-Haupt in *Ἑπεύρεσις H. Sirobodu dargebracht*, 1927, 148-9. O. Weber, *Arabien vor dem Islam* (*Der alte Orient*, III), 1901, 32 goes further: the Ptolemies secured the sea-route from the Red Sea to the Persian Gulf "durch zahlreiche Stationen." To A. Bouché-Leclercq, *Histoire des Lagides*, I, 177, n. 1 the whole thing was "une flatterie sacerdotale."

Mussendam, which Alexander had known, and effective knowledge (as regards the Arabian coast) was probably confined to the inner Persian Gulf north of Al Qatar. Eratosthenes knew of no boundary of Arabia on the east except the Persian Gulf¹, and states explicitly that in his time no one had gone beyond (*i.e.* east of) the *σμυρνοφόρος*, which here means the Hadramaut². Juba, in his collections for his monograph on Arabia, found nothing about the S.E. coast, and could only say of it *ultra* (beyond Ras Mussendam) *navigacionem incompertam ab eo latere propter scopulos*³. Pliny, who in his patchwork account of Arabia preserved some valuable Hellenistic information, knew nothing about it, though he was able to fill in, citing *nostrī negotiatores*, some towns on the Pirate Coast north of Ras Mussendam which Juba had omitted⁴; but he has preserved a statement, of unknown date, which represents the first hearsay, in Hellenistic times, that such a place as Oman existed: south of Bahrein are certain great islands, far from Persis, which no one had reached and which were approached by one narrow channel (Straits of Ormuz)⁵; one recalls that the first hearsay regarding the Indian peninsula came to Nearchus and Onesicritus as a dim report of "islands" south of the India they knew⁶, that the first hearsay regarding Somaliland appears in Theophrastus as "islands⁷," and that China was once an "island⁸." Finally Arrian, writing more particularly from third century evidence, says that no one, unless some storm-driven mariner, had ever circumnavigated Arabia on account of the heat and the desert nature of the country, the heat making the farther part of the country (beyond the incense land) uninhabitable; the reference to all the seas being one shows that he is probably quoting Eratosthenes⁹. In face of this evidence, the idea that Ptolemy II circumnavigated Arabia is absurd¹⁰.

Where then was Parsetet? As Ptolemy went south, it must clearly be some part of Arabia; but one must explain the name "Persia." If the expedition reached any place or tribe which had once acknowledged, or was supposed to have acknowledged, Achaemenid suzerainty, that would be enough to enable a priestly scribe to talk of Persia; for there seems to be an exact parallel. An Egyptian inscription at Esneh, seen by Champollion and Rosellini but since vanished¹¹, attributed to Ptolemy III the conquest of "Macedonia." He was never near Macedonia in his life. But it seems probable, from certain coins of Abdera in Thrace¹², that at some time subsequent to his conquests along the Thracian

¹ Strab. xvi, 767.

² Strab. xvi, 769; see the beginning of the passage, *ib.* 768, *σμύρναν ἢ Χατταμωτίτις*. The myrrh district was in fact nearer Bab-el-Mandeb.

³ Pliny, *H.N.*, vi, 149.

⁴ *Ib.*; see Glaser, *op. cit.*, 79-82.

⁵ Pliny, *H.N.*, vi, 148.

⁶ Strab. xvi, 691.

⁷ *Hist. Plant.*, ix, 4, 10. Cf. Pliny, *H.N.* xii, 60.

⁸ Paus. vi, 26, 8.

⁹ *Indike*, 43 §§ 2, 3, 6; see the writer in *C.R.*, xl, 1926, 14. Of course Arabia had been circumnavigated before Arrian's day; but I think in ch. 43 he is deliberately omitting his own time and taking his readers back into an earlier period.

¹⁰ I note for completeness that Pliny's statement, *H.N.*, ix, 6,—the inner Persian Gulf was crossed *Ptolemaeo regi*, "for king Ptolemy,"—refers to some voyage in the first century B.C., when the Ptolemies were reaching out into the Indian Ocean. For this use of the dative in Pliny, cf. vi, 63, *reliqua inde* (*i.e.* Hyphasis to Ganges) *Seleuco Nicatori peragrata sunt*, *i.e.* were traversed "for Seleucus" (by Megasthenes). Droysen, *Hellenismus* (2nd ed. 1877), iii, 2, 343, deduced from ix, 6 that Ptolemy III had returned round Arabia; this has long gone the way of the parallel theory that Seleucus reached the Ganges.

¹¹ Dittenberger, n. 19 to *O.G.I.S.* 54; Droysen, *op. cit.*, iii, 1, 384.

¹² Ptolemaic coins at Abdera, Head, *Hist. Numm.* 2 491. H. von Fritze, *Nomisma*, iii, 28, expresses doubts; but Polyb. v, 34, 8, *τῶν κατ' Αἰὼν καὶ Μαρωνείαν καὶ πορρώτερον ἔτι πολλῶν κυριεύοντες*, should be conclusive, for Abdera was the next large town beyond Maronea westward.

coast, doubtless during the troubled reign of Demetrius II, his officials temporarily occupied that city; and as the treaty of 279 between Antigonos Gonatas and Antiochus I had placed Abdera within the Macedonian sphere (though it does not follow that it was Macedonian under Demetrius II), this was enough for an Egyptian scribe to talk of the conquest of Macedonia.

Is it not possible, however, that Parsetet might merely mean the Seleucid empire? In the native Egyptian Potter's Oracle, where I think W. Struve¹ has shown that the *ξωνοφόροι* are Persians, it is prophesied that their city shall be a desert and the city on the sea (Alexandria) a place for drying nets, and I think myself that the city of the Persians here is Antioch (Reitzenstein's and Struve's Persepolis would have no meaning in the third or second century); "a plague on both your houses," says the Egyptian to the Macedonian. If so, Parsetet *might* mean Seleucid territory; but it cannot here mean that in fact, as Ptolemy goes south from Heroopolis, and there was certainly no Seleucid territory in western Arabia; the Assyrians and Babylonians had come thither round the fertile crescent, but the way south from Damascus was barred to the Seleucids. All that the Seleucids did in Arabia was done on the Persian Gulf, though their activity there has hardly received due recognition. Pliny (vi, 160) had heard of three Greek cities in peninsular Arabia—Arethusa, Larissa, Chalcis—*deleta variis bellis*; these names belong to one of the first two Seleucids and can belong to no one else; the cities therefore stood on or near the Persian Gulf, between the Euphrates and Gerrha², reaching out toward that great trading centre. Farther round the Gulf, east of the Tigris, stood Seleuceia of the Erythraean Sea³, and beyond that, probably on the harbour of Bushire, the famous Antioch in Persis⁴, which I shall allude to later. As this Antioch was refounded by Antiochus I, this colonisation round the Gulf may be attributed to Seleucus; that is, it was already known to Ptolemy II, and may have prompted his activity in the Red Sea. But it has nothing to do with the meaning of Parsetet.

Parsetet then is some part of Arabia supposed once to have been under Achaemenid rule or suzerainty, which means the north-west. All the empires had there striven to get astride the Incense Route, the route by which incense and other South Arabian products, together with the Indian trade coming to South Arabia by sea, passed northward; it ran through Saba and Minaea to Iathrib (Medina) and thence followed the line taken later by the pilgrims of Mecca and now by the railway; it ran through Dedan (Al-'Ula) and Hegra (Madain Salih), probably diverged to Teima, and thence went to Petra, where it bifurcated, one branch going to the sea at Gaza and the other north to Damascus and Tyre. The Temai of Teima had been tributary to Tiglath-Pileser III; Sargon had received tribute from the great tribe of Thamud in the Hedjaz; Nabonidus, the last king

¹ *Raccolta Lumbroso*, 1925, 273. For the text, U. Wilcken, *Hermes*, xL, 1905, 544; R. Reitzenstein and H. H. Schaeder, *Studien zur antiken Synkretismus aus Iran und Griechenland*, 1926, 39, 40.

² Though Pliny is expressly describing peninsular Arabia, these cities have been placed everywhere from Syria to Socotra. V. Tscherikower, *Die hellenistischen Stadtgrundungen*, 1927, 81, of course saw they were Seleucid, but went no further.

³ *O.G.I.S.*, 233, l. 105.

⁴ We have to account for three Greek cities in Persis—Laodicea, Methone, and Antioch (see Tscherikower, *op. cit.*, 98–9, who does not attempt to place them). I agree with E. Herzfeld's reasoning (*Klio*, viii, 1908, 14) that Laodicea was in the north-east (*i.e.* on the Persepolis-Ecbatana road); and on the Persepolis-Artemita road he has identified Ptolemy's Maitona (p. 16), which is obviously Methone; this only leaves Antioch for Bushire, where Ptolemy still knew of a "Greek-town," Ionaca. A road must have run up from it to Persepolis, as to-day to Shiraz. See my map "Hellenistic Asia" in *Camb. Anc. Hist.*, vii.

of Babylon, had conquered and resided at Teima, which he adorned with buildings and where he installed the god Sin; Cyrus, before taking Babylon, had conquered the "Arabs," which probably means he drove Nabonidus from Teima. Egypt meanwhile had disputed Babylon's influence, as the name Petosiris on the Teima stone shows: probably she had regarded all this territory as a sphere of influence¹.

Persia then had from the first a footing in this region. In a tablet of the eighth year of Cyrus as King of Babylon and King of the Lands there is mentioned, among a number of notables, "Ša-Nabû-tâbi, governor of Salamu²"; Professor S. Langdon has identified Salamu with the Shalamians³, who at a later time coalesced with the Nabataeans (see *post*). Cyrus then retained for a time the Babylonian officials; he must have claimed whatever Babylon had ruled, though the statement that he had a satrap of "Arabia" may be doubted⁴. Darius in the Naksh-i-rustam and Behistun inscriptions claimed "Arabia"; naturally this meant the north-west only, but as he received a yearly present from Arabs of 1000 talents of frankincense⁵, one may suppose that he too was across the incense route. For Sargon also had received a similar tribute from Iti'-amara the Sabaeen in South Arabia⁶ [as had Sennacherib from Karibi-ilu king of Saba]⁷, and doubtless Darius' incense also came from the south; the reason is obvious, payment for the security of the caravans. Of course neither Sargon, nor Sennacherib, nor Darius penetrated to the Sabaeen kingdom. Probably the scribe of the Pithom stele would not know very accurately what Darius *had* ruled or claimed to rule; but he would know in general terms that he had exercised rule in north-west Arabia, and that was quite enough for him to speak of "Persia."

T-sh-y-t, from its position in the account, must be a general name for some district, on the analogy of Punt; I could not identify it myself, but I have had the advantage of a very brilliant suggestion by Mr. Sidney Smith (see Appendix I) which exactly meets the case; briefly, it is the hill country at the back of the Hedjaz coast. As to "the end of the South," there is a curious parallel in Eratosthenes, who called his four South Arabian kingdoms—Minaea, Sabaea, Katabania, Hadramaut—ἑσχατα πρὸς νότον⁸; but though one might perhaps argue that therefore the Egyptian scribe meant the northern Minaeans (Musran), I believe myself that it is a mere coincidence; for even if the phrase be Ariston's (see *post*), I do not think an Egyptian would know of it. Certainly Ptolemy did not go to South Arabia; the Sabaeans were never attacked by any one, except their neighbours, prior to Aelius Gallus; doubtless it would suffice for the scribe if the expedition went a good way south from Heroopolis. However, before considering where it did go to, one must consider its date, its purpose, and contemporary knowledge of western Arabia.

The Pithom stele only places the expedition somewhere between the sixth and twelfth years, *i.e.* between 280–79 and 274–3⁹; but as the beginning of the first Syrian war with

¹ See for the foregoing S. Smith, *Babylonian Historical Texts*, 1924, ch. III: *A Persian verse account of Nabonidus*, with the commentary, 76–81, 102. Cf. De Lacy O'Leary, *Arabia before Muhammad*, 1927, 36, 53.

² A. Boissier, *Rev. d'Assyriologie*, XXIII, 1926, 14, 15,

³ *J.R.A.S.*, 1927, 529.

⁴ Xen. *Cyrop.* VIII, 6, 7.

⁵ Herod. III, 97.

⁶ S. Smith, *Camb. Anc. Hist.*, III, 58; Fr. Hommel in D. Nielsen's *Handbuch der altarabischen Altertumskunde*, 1927, 76–7.

⁷ [Karibi-ilu ordered a treasure of precious stones and choice herbs (*i.e.* incense) to be sent to Sennacherib; D. D. Luckenbill, *Annals of Sennacherib*, 1924, 138. S. S.]

⁸ Strab. XVI, 768.

⁹ In C. F. Lehmann-Haupt's article *Vom pyrrischen und ersten syrischen zum chremonideischen Kriege*

Ptolemy's invasion of Seleucid Syria falls in 276¹, only two years are in fact open, 278 and 277 (we shall see that two years are required). Now Ptolemy's acquisition of Miletus in 279 was a definite challenge to Antiochus I; and when I was working out the first Syrian war² I was quite unable to explain the fact that Ptolemy did not follow up his challenge till 276, though Antiochus was in great difficulties meanwhile. It seems clear that Ptolemy lost his chance because he was engaged in Arabia; but, if so, the Arabian expedition was either forced upon him or else it promised him more than an attack upon Antiochus might promise.

We shall see that it *was* forced upon him, by the Nabataeans, and also that it promised him a good deal.

But first it is worth trying to get the existing Greek knowledge of Arabia into its true order. Alexander had had no idea of the size of the country, as is shown by his order to Hieron of Soli to sail round in his triakontor from Babylonia to Heroopolis (Gulf of Suez), and by Hieron's wise report, after he turned back at Ras Mussendam, that Arabia must be nearly as big as India³. At the same time Alexander had sent a ship or ships south from Heroopolis to circumnavigate Arabia in the opposite direction; doubtless the two expeditions were meant to meet, but they never did, for the Heroopolis ships (presumably Anaxicrates was commander) also turned back soon after Bab-el-Mandeb. This expedition is not noticed in the usual histories of Alexander, but is thrice referred to in Greek sources⁴: Arrian shows it was an expedition, not a merchant's voyage; the parallel reference in Theophrastus to want of water identifies the voyage he mentions with Arrian's; Strabo shows it was ordered by Alexander, and gives the name Anaxicrates. From this expedition comes Theophrastus' information about Arabia, valuable because it can be dated; he regularly reproduces the knowledge Alexander acquired. Anaxicrates reached Bab-el-Mandeb, for Strabo (*l.c.*) on his authority gives the distance to it from the head of the Gulf of Akaba, 14,000 stades, a measurement extraordinarily creditable to the expedition; the actual distance is some 2100 km., roughly some 1312 miles, and 14,000 stades, taking the bematists' stade as (roughly) three-quarters of the Greek stade⁵, is also some 1312 miles. Anaxicrates' business was not to explore but to get round; he may not have landed at all except for water till after Bab-el-Mandeb, when lack of supplies ("water" in the tradition) first drove him ashore and then turned him back. As his object was to get round, he naturally when ashore enquired what was *before* him, not behind, and heard that four peoples successively held the southern coast—Katabania, Sabaea, Hadramaut, Mahra; that his Μαμάλι (v.l. Μάλι) is Mahra, as Sprenger and Hommel have suggested, is not open to doubt⁶. No extant Hellenistic writer mentions Mahra again. If some modern writers on the subject had only sought for Theophrastus' *source*, we should have been spared the interminable discussion as to whether Mamali is Minaea or why he does not mention Minaea. Anaxicrates did

in 'Επιτύμβιον H. Swoboda *dargebracht* it is stated, as if it were a fact, that this expedition took place in Ptolemy's 11th year (see pp. 148, n. 22, 149, 151). This date is however Lehmann-Haupt's own conjecture, to accord with his scheme of the first Syrian war; and that scheme, and much of his article, are mere repetitions of views which he expressed many years ago and which have since been refuted more than once. See in the last place M. Holleaux, *Rome, la Grèce, et les monarchies hellénistiques*, 61, n. 3.

¹ S. Smith, *Babylonian Historical Texts*, on the Antiochus chronicle.

² *J.H.S.*, XLVI, 1926, 155.

³ Arr. *Anab.*, VII, 20, 8; *Camb. Anc. Hist.*, VI, 421.

⁴ Arr. *Ind.* 43 § 7 (see the writer in *C.R.*, XL, 1926, 14); Theophrastus, *Hist. Plant.*, IX, 4, 2-4; Strab. XVI, 768. Anaxicrates later entered Seleucus' service, Tzetzes, *Hist.*, VII, 174; see Schwartz in *P.W.*

⁵ J. Marquart, *Philologus*, Supp., Bd. x, 1907, 1.

⁶ See on this controversy Tkač, *Saba*, 1333.

not hear of Minaea because it was far behind him when he landed and it held no part of the coast in front of him.

Systematic exploration of both coasts of the Red Sea began with Ptolemy II. Satyrus, the first to sail down the African side, is definitely earlier than 276, for he could not have called the town he founded Philotera once Arsinoe II was in power¹. Ariston, who was sent to explore the Arabian coast, must be before Ptolemy's expedition; the explorer precedes the army. Doubtless both officers were sent out at the beginning of the reign. Ariston's orders were to explore the coast as far as the ocean²; and he did reach Bab-el-Mandeb, for Eratosthenes, who must reflect his voyage as Theophrastus reflects that of Anaxicrates, criticised the figure of 14,000 stades for the distance, using a measurement which can only be Ariston's³. Ariston was still alive, and apparently of some consequence, in 252⁴. Now we know of no voyage but his down the Arabian coast in Ptolemaic times, and we have just one literary periplus of that coast within the same period; that that periplus is based on Ariston's report cannot be doubted, and indeed Diodorus (III, 42, 1) practically says so. There remain two versions of this periplus; (a) that of Agatharcides (middle of second century), represented by the Photius extracts and more fully by Diodorus, III, 42-47⁵, with some remarks added by Diodorus himself after his fashion; and (b) that of Strabo, XVI, 776-8, abbreviated from Artemidorus (c. 100) who in turn took it from Agatharcides. Artemidorus (we shall see) added something to Agatharcides, as did Agatharcides to Ariston. That this periplus goes back to Agatharcides was always obvious; but that its kernel dates from c. 280 does not seem to have been grasped.

Ariston explored the coast of the Sinai peninsula round to the Nabataean Aelana at the head of the Gulf of Akaba⁶, and then coasted southward; the notable points are, that the Nabataeans did not yet extend farther south than the south end of the eastern side of the Gulf of Akaba; that south of them he found only small tribes; that he brought the first Greek report of the great tribe of Thamud, occupying part of the Hedjaz; that south of the Thamud he found a gold land, with a people called Debai (? south of Jiddah) about a gold-bearing river (his description of its mouth shows the eye-witness), and beyond them the Alilaioi and Gasandai, where nuggets of gold could be had for a song; and that he found the southern kingdom of Minaea, with its capital at Karna (Karna-wū, Ma'an) still existing. From him comes Eratosthenes' list of the four South Arabian kingdoms; he heard of nothing east of the Hadramaut, for his mission was fulfilled when he passed Bab-el-Mandeb. One thing of course he did not find, for it was not yet there: the Milesian colony of Ampelone (*post*). Both Eratosthenes and Agatharcides may have supplemented his account of Saba with information derived from merchants. Otherwise, north of the gold coast, Agatharcides reproduces him, though there was later information to be got, as Pliny was to show; but the Hellenistic custom of merely copying out your predecessor was by his time in full swing⁷.

Perhaps I may here clear up one point about the gold coast. A little north of the river of the Debai was the harbour of Charmouthas, which Ariston, with a discoverer's

¹ See the writer in *Class. Quart.*, xx, 1926, 98.

² Diod. III, 42, 1.

³ Strab. XVI, 768.

⁴ *P. Cairo Zen.* 59247.

⁵ Photius and Diodorus are conveniently given side by side in Müller's *G.G.M.*, I (Agatharcides). Agatharcides sometimes betrays that he is copying a third century document; see the reference to τὴν Προλεμαίων Συρίαν as still existing, in the Photius extract *G.G.M.*, I, 189.

⁶ For this part see B. Moritz, *Der Sinai-kult in heidnischer Zeit*, in *Gott. Abh.*, XVI, 1916-7, no. 2, 36-7.

⁷ I gave a strange instance of this, to the neglect of contemporary knowledge, in *Class. Quart.*, xx, 1926, 98.

enthusiasm, described at length as the best harbour in the world. Agatharcides¹ reproduced this; but a little later Artemidorus, though copying Agatharcides, called it a bad harbour, "dangerous to every ship²." That is, some from Egypt had naturally gone thither for gold and discovered the harbour to be valueless, and Artemidorus happened to have heard this. This explains the passage in Agatharcides on which such strange theories of early Greek intercourse with Arabia have been (and still are) based; for of course he knew that people from Egypt had gone gold-hunting. He says that the Debai were friendly, not to all Greeks, but to Boeotians and Peloponnesians³; that is, he had heard of some occasion on which *certain* Greeks among the mixed gold-hunters⁴ had won the natives' confidence, through some fancied similarity of religious rites. The rite in question, whatever it was, is said to have been connected with Heracles; and he was one of the two divine ancestors of the Ptolemaic dynasty.

I turn now to the Nabataeans and the cause of Ptolemy's expedition. We may dismiss from our minds the civilised Nabataeans of the Christian era; at this time they had a thoroughly bad reputation for raiding and piracy⁵. In the later fourth century they had held the eastern coast of the Dead Sea⁶; subsequently they lost it to the Ptolemies⁷, together with the lucrative bitumen fishery, and can have felt little love for them in consequence. They may have once been under Babylonian influence, as they continued to use the Babylonian months⁸; if they were the "Arabs" who in the sixth century occupied Gaza⁹, as seems probable, they had there come under Persian rule; they may have been the Arabs who, in Persia's service, held Gaza so desperately against Alexander. Their port now was Aelana at the head of the Gulf of Akaba; they extended down the east side of that gulf, but had not yet penetrated the Sinai peninsula. Trade by sea between Heroopolis and Aelana round Sinai might be an old matter; but doubtless the voyages of Anaxicrates and Ariston, both of whom had sailed over this route, had given that trade an impulse. Anyhow after Ariston's appearance the Nabataeans lost their tempers, manned the ships they used for piracy, and started harrying the Egyptian traders¹⁰; as the event is recorded by both Diodorus and Strabo, the common source must be Agatharcides. Diodorus says they were caught at sea and punished by quadriremes, *i.e.* Ptolemy's war-fleet; Strabo says *στόλου ἐκπορθήσαντος αὐτοὺς*, which points to an invasion of their country. Antigonos I had attempted to take Petra, and failed; but there is a statement, probably from Poseidonius, that "the Macedonian kings" could never conquer the Nabataeans¹¹, which may point to more than one

¹ Diod. III, 44, 7; not in the Photius extracts. Diodorus himself added the comparison with Carthage.

² Strabo, XVI, 777.

³ *G.G.M.*, I, 184 (both Photius and Diodorus).

⁴ The gold-hunters would be of many nationalities; compare the association of traders from many lands who went to Somaliland in the second century, U. Wilcken, *Zeitschr. f. ag. Spr.*, LX, 1925, 86.

⁵ Diod. II, 48, 2 (?from Poseidonius): their life is piratical and they raid and plunder their neighbours; III, 43, 4 (Agatharcides), they are as bad as the Taurians of the Crimea. It has been suggested that their aggression was perhaps more commercial than piratical; W. H. Schoff, *The Periplus of the Erythraean Sea*, 1912, 102. I doubt this.

⁶ Diod. XIX, 99, 1. U. Kahrstedt's view, *Syrische Territorien*, 1926, 36, arises from a misunderstanding of *ἐκ τοῦ πέραν*, which only refers to long-range shooting.

⁷ J. Beloch, *Griech. Geschichte*, IV², II, 326; see U. Wilcken in *Archiv*, VI, 393.

⁸ [The Nabateans of the Assyrian records *may* have been the Nabataeans, which would explain this. But the Nabataeans were half Aramaean, as is proved by their language, and they may have derived the calendar from the Aramaeans of the Assyrian provinces. S. S.]

⁹ Herod. III, 5; 7; 91.

¹⁰ Diod. III, 43, 4; Strab. XVI, 777.

¹¹ Diod. II, 48, 4 and 5.

attempt. Ptolemy II then, who had to protect his traders¹, probably invaded Nabataea and did his best to chastise the people; it may have been now that they lost the Dead Sea littoral, but if he really thought of conquering them, he failed. This campaign may be assigned to 278, leaving 277 for Parsetet. I may add that the Nabataeans and the smaller Arab tribes about them, whom they ultimately absorbed and could perhaps even now influence, were never really friendly to the Ptolemies, though of course they traded together and so on. In 273 Ptolemy had to create defences for Heroopolis against "the foreign peoples there (or therein)"², the local Arabs, who may or may not have had Nabataean backing; this wall was finished four years later. In 218 the Arabs east of the Jordan joined Antiochus III against Ptolemy IV³. In later Ptolemaic times the Egyptian frontier was guarded against the Nabataeans by an *Arabarches*, a commander of the Arab frontier guards⁴ whom Egypt enlisted against their fellows, as Rome was to do with Goths; the dealings of the then powerful Nabataeans with Egypt in the time of Caesar and Cleopatra are well known. Rome ultimately settled the question by annexing both Egypt and Nabataea.

I must now turn to Arabia. Here I shall assume that if Ptolemy II interfered in Arabia he would seek some advantage for himself in the process. I have tried to show elsewhere⁵ that, for all his ambition, the mainspring of his actions was frequently economic. Now Assyria, Babylon, and Persia had all in turn striven to get astride the incense route; were Ptolemy to do the same, south of Nabataea, and divert part of the traffic to Egypt, he would both advantage himself and damage Nabataea. It was indeed an obvious course to take; and I am going to give some reasons for thinking that the result of the expedition to Parsetet was that he formed relations in N.W. Arabia with a particular people along the incense route, the inhabitants of what is now Al-'Ula on the Medina railway.

The district of which Al-'Ula was the centre appears first as a Minaean colony, or branch of the Minaean kingdom, ruled by the kings of the southern Minaean kingdom whose capital was at Karna-wū (Ma'an); the northern colony called itself Musran or Ma'an Musran⁶. We now possess a considerable number of inscriptions from Al-'Ula in three languages—Minaean, Lihyanite, and Thamudean⁷; Al-'Ula itself was the Biblical Dedan, the name occurring in both Minaean and Lihyanite documents⁸. The first thing to consider is the position there in 277. M. Hartmann has suggested⁹ that the Minaean kingdom fell c. 230 B.C., a date widely quoted since; but his reason for it was merely that the last mention of that kingdom is Eratosthenes', and Eratosthenes' date is c. 230. But the last mention of the Minaean kingdom is, in reality, probably that of Ariston

¹ *O.G.I.S.*, 132 shows Ptolemaic policy in this respect.

² Pithom stele; Sethe, *Urkunden*, II, 94 (Glanville's translation). The defences of Heroopolis have nothing to do with Antiochus or the Syrian war, as Lehmann-Haupt, *op. cit.*, supposes.

³ Polyb. v, 71.

⁴ J. Lesquier, *Rev. arch.*, 1917, ii, 95; Ch. Clermont-Ganneau, *Rev. de l'hist. des religions*, LXXX, 1919, 23.

⁵ In a lecture on Ptolemy II, published *Journal*, XIV, 246.

⁶ Nielsen, *op. cit.*, 41.

⁷ The Minaean and Lihyanite texts then known were given by D. H. Müller, *Epigraphische Denkmäler aus Arabien*, in *Denkschriften K. Ak. Wien*, 1889; texts cited here as M. Many new texts, with revisions of a number of Müller's, and the Thamudean graffiti, are given by PP. Jaussen and Savignac, *Mission archéologique en Arabie*, II, 1914 (pub. 1920); texts cited here as JS. On Al-'Ula generally see their preface. The Greek graffiti all belong to the Roman Empire.

⁸ Identified as Dedan, JS 23 (Minaean) and 138 (Lihyanite). See the editors' discussion, 75 sq.

⁹ *Die arabische Frage* (= *Der islamische Orient*, II), 1909, 132.

c. 280, copied by Eratosthenes; and as far as this argument goes, that kingdom might have ended anywhere between c. 280 and Agatharcides' time. Also Musran might have been lost to the Minaeans before their southern kingdom fell, or (less probably) might have remained Minaean after that event. I am not concerned with the southern kingdoms; but it seems most probable that Al-'Ula was still Minaean in 277 anyhow, from Ariston's account. Now it is known that the Minaeans of Al-'Ula traded by sea as well as by land¹; they must therefore have had a port. Tkač, arguing on other lines, has decided, I think correctly, that their port was Egra, which he identifies with Akra, a little south of the mouth of the Wādī Hamd²; it must have been somewhere in that neighbourhood, as the natural route to the sea is said to lead to the mouth of that wādī. These Minaeans were therefore easy to find and easy of access. Indeed they had long been known in Egypt; the famous inscription Halévy 535³, which shows them trading with Egypt and Ebir-Naharain (Syria), relates how one of their caravans was caught in a war between Egypt and Persia (which might just as well be Ochus' invasion in 343 as any of the earlier ones) and brought safely out of Egypt by their gods. Ptolemy II must have known something of Al-'Ula before his expedition; probably part of Ariston's business (he gives minute details of the coast) was to look for a good site for a trading post on the sea whence touch might be kept with the interior; the ultimate result was Ampelone (*post*). Conceivably too Ariston heard of the great sanctuary at Hereibeh⁴.

Subsequently Al-'Ula is found under the rule of the Lihyanites, a branch of the Thamudean people. The dating of the Lihyanite inscriptions has been a problem, and the latest book I know merely says they are pre-Islamite⁵; but I think one can get closer than that. Both the extreme views, in fact, are no longer tenable. D. H. Müller's dating in the 6th–5th century B.C. was disproved by Glaser⁶, and if it had not been it could not stand against the evidence of Ariston-Eratosthenes. Glaser⁷ in turn put them after A.D. 300, on three grounds: one is epigraphical, derived from *South Arabian* inscriptions, of another race and language, which is hardly scientific; one is derived from the supposed traces of some Jews in Lihyan, which would fit the Ptolemaic period at least as well (see *Acts* ii, 11); the third, and the one on which he really relied, was the name "Wa'il the Ghassanide" in M. 1; he said that the combination of these names would show any Arab scholar that this inscription was very late. But the name Wa'il, which is early enough anyhow⁸, does not appear in the reading of this inscription in JS 55, "Le représentant de Ha-Ghassān"; and Ghassān has nothing to do with the later Ghassān, but is Ariston's Gasandai⁹. But in fact Glaser's theory is impossible for a very simple reason. He allotted two centuries for the Lihyanite kingdom¹⁰; but the number of kings now known (see Appendix II) demands three to four centuries, and it is very unlikely that we know nearly all. Now there was no Lihyanite kingdom in Mahomet's time, while the Thamudean graffiti at Al-'Ula have to come in between the Lihyanites and Mahomet: consequently a date after A.D. 300, or any date late in the Christian era, for the beginning of the Lihyanite kingdom seems now out of the question. On the other hand, a Nabataean inscription from Hegra (Madain Salih) of 1 B.C. shows two borrowings from

¹ M. 25 as revised JS, I, 255, no. 3: "the gods of Ma'an have protected him on the sea and on the caravan route." Also the Minaean Zaidil (p. 20, n. 6) owned a merchant ship.

² *Iambis* in P. W. (revising his article *Egra*, 1).

³ A translation is given by Weber, *op. cit.*, 15.

⁴ ? the *ἱερὸν ἀγῶνιστον* of Diod. III, 44, 2.

⁵ Nielsen, *op. cit.*, 44.

⁶ *Skizze*, II, 110.

⁷ *Ib.*, 110–123.

⁸ JS (Minaean) 36, 79, 180.

⁹ Tkač, *Gasandai* in P. W.; cf. his *Saba*, 1389.

¹⁰ *Skizze*, II, 121.

Lihyanite¹, and the Lihyanite king Mas'udu signs his name in old Nabataean (*i.e.* Aramaic) characters, which PP. Jaussen and Savignac assign without hesitation to the second century B.C.². There can be little doubt that their view that the Lihyanites, who derived their script from the Minaeans³, immediately followed the Minaeans is correct⁴. I imagine that a proper examination of the prosopography of the inscriptions (which I cannot make) would throw light on this, for one thing leaps to the eye at once: the family or sept of the Ammirata, who occur so often in the Minaean inscriptions, run on into the Lihyanite⁵, even with the same proper names⁶; Minaeans did not vanish from Al-'Ula when the Lihyanites took over the rule of the country.

The Lihyanites were not averse to foreign borrowings; beside their writing, we find at Al-'Ula the Syrian (and subsequently Nabataean) god Baal-Shamîn (JS 64), who laid Al-'Ula under an interdict because a woman blasphemed him, and also a name compounded with Baal (M. 35); one recalls that their Minaean predecessors had traded with Syria. But the point is, that we seem to find among the Lihyanites traces of Ptolemaic influence. First, the statues. South Arabian statuary is primitive stuff, as a glance at the statues and reliefs which A. Grohmann has figured in Nielsen, pp. 164 *sqq.*, will show; when he says that sculpture had not reached the level one would expect from the architecture, he is letting it down gently. But the sculpture of the Minaeans of Al-'Ula is poor even for Arabia; the two great cats (?) before a tomb with a Minaean dedication⁷ resemble a child's first drawing, and the lion's head⁸ is of much the same type. We pass straight from these to the extraordinary Lihyanite statues of men. There was at Hereibeh, north of Al-'Ula, a great sanctuary, where stood several statues at least; one base still bears a Lihyanite inscription⁹. When the railway was being made two of the statues were turned up, one a torso, one complete with head¹⁰; both over life-size. Unfortunately the local Arabs saw in them the bodies of sinners who had resisted the teaching of the prophet Saleh, scourge of the Addites, and had been turned to stone as a punishment, so they hacked away part of the face of the complete statue; in this state it was photographed by PP. Jaussen and Savignac, but a mischance prevented it being salved and it has doubtless ceased to exist. If one compares it with the Minaean cats, the foreign influence is obvious; and there seems little question that it is Ptolemaic. R. Dussaud¹¹, from certain resemblances to statues from Phoenicia, has pronounced it Ptolemaic of the third or second century B.C. Mr. A. W. Lawrence¹² tells me that it is "probably Ptolemaic." Mr. S. R. K. Glanville's

¹ *C. I. Sem.*, II, 1, no. 197, with M. de Vogüé's notes.

² JS 334 (p. 220), 337; see Preface, xi.

³ *Ib.*, Preface, xiv, n. 1.

⁴ *Ib.*, Preface, xii. They suggest one or two centuries before Pliny. But Pliny's mention of the Lihyanites (Lechieni) might come from any time in the Hellenistic period.

⁵ JS (Minaean) 8, 11, 69, 77, 86, 94, 136, 141, 156-7, 173, 176, 180, 190, 192, 198-9; (Lihyanite) 43, 281, 288.

⁶ *Cf.* JS (Minaean) 180 with (Lihyanite) 43.

⁷ Jaussen and Savignac, *op. cit.*, Atlas to vol. II, Plates xxxiv and xxxii, no. 4, the tomb called A². The Minaean dedication: M. 36 = JS 32.

⁸ Atlas, Pl. xxxvi, 1.

⁹ *Ib.*, Pl. xxxii, 3; the inscription JS 82.

¹⁰ *Ib.*, Pl. xxix; *cf.* xxviii, 2 and 3, xxx, xxxv; see vol. II, 59. This statue has been reproduced in *C. R. Ac. Inscr.*, 1909, 439, and *Syria*, I, 167.

¹¹ *Syria*, I, 166: "L'imitation égyptienne est sensible; les épaules et les pectoraux sont traités à la façon des statues égyptisantes d'époque ptolémaïque trouvées en Phénicie, notamment à Oumm el 'Awamid."

¹² From a letter to me: "probably Ptolemaic, though it might possibly be as late as 100 A.D.... The sculptor had been trained in the imitation of Egyptian work, either by an Egyptian who carved portrait statues in the native style for the Ptolemies, or by a local man so trained (which only dates it a generation

opinion¹ is that the Egyptian style places it somewhere between the middle of the sixth and the end of the third century B.C., which, unless the dating here adopted for the Lihyanite kingdom (*post*) be very wrong indeed, means the latter part of the third century. Probably it represents a Lihyanite king; if the sanctuary at Hereibeh be ever excavated, we shall know more about it. Meanwhile, if there was Ptolemaic statuary at Dedan on the incense route, may we not have found what we are seeking, the goal of Ptolemy's expedition?

I turn to the kings' names (see Appendix II). Among them are two (or three) called Talmai or Tolmai (the vowels are of course uncertain). Talmai is a known Hebrew name in the O.T. and occurs in the Talmud: the discussions of it I have met² do not however give any other instance in the Arabian tongues, and I have not succeeded in finding one. There is however a case among the Aramaic-speaking Nabataeans: a Nabataean inscription found in the Delta is dated by the fourth year of some Talmai and the Egyptian month, and the editor³ takes it as certain, from the month and the place, that Talmai here means the reigning Ptolemy, the P and the termination -os being dropped: the dropping of the P occurs elsewhere⁴. I suggest that these Lihyanite kings took the name Ptolemy⁵. The fact that the *form* is right for Ptolemy does not of course make this suggestion more than a possibility; but I think we can go further. The two Tolmais (or two of the Tolmais), and they alone of the Lihyanite kings, have epithets to their names. In the case of Tolmai son of Lawdān (M. 8), Müller said he could neither translate nor explain the epithet (which unfortunately he did not transliterate), and Jaussen and Savignac have not dealt with this inscription; so I must let him be, merely remarking that a corruption of a foreign word *might* be an explanation. But the Tolmai son of Hanu'ās of M. 4 = JS 54 has an epithet which Müller rendered *der himmlische*, "the celestial." Jaussen and Savignac say that no one can dispute, as a matter of philology, that this may be the meaning, but that it seems a strange epithet to apply to a Lihyanite, even a king; they therefore seek another affinity for the word, and construe it "the double exaltation" of Tolmai, which (I may remark) they do not explain either⁶. I gather that they would have been content with Müller's translation if they could have explained it.

or two different). It is most unlikely the sculptor had studied an out of date type of Egyptian statue with such care that he chose to reproduce it in preference to any of the types he was used to carving, therefore he lived at a time when statues of kings were still included among the jobs of Egyptian workmen. And that, I think, points to the Ptolemaic dynasty."

¹ He distinguishes two elements in the statue: one Egyptian in *feeling* and in certain details, as the wig and breast development; the other—head-cloth, belt, and armlet—non-Egyptian, probably native. He continues: "the Egyptian style with which I would compare the figure is that of the later XXVth Dynasty to the earlier Ptolemaic. All the Egyptianising details conform to that—say about the middle of the 6th century to the end of the 3rd." (From a letter to me.)

² B. Moritz, *op. cit.*, 26; Ch. Clermont-Ganneau (next note), p. 18.

³ Clermont-Ganneau, *Les Nabatéens en Égypte*, in *Rev. de l'hist. des religions*, LXXX, 1919, I. Moritz, *op. cit.*, would see a feminine form of Talmai in a Nabataean inscription from Hegra of A.D. 39, *C. I. Sem.*, II, 1, 215, l. 4, where de Vogue reads Tabam (?).

⁴ *E.g.*, Bar-tolomaeus; and Tolemaioth (probably) on the Gizeh sarcophagus (p. 20, n. 6), where the Egyptianised Minaean has retained the termination, just as the Graecised Minaeans (p. 20, n. 10) did at Delos (D-L-TH for Delos).

⁵ I am not sure whether or no Dussaud (*Syria*, I, 168) meant to suggest this.

⁶ They can only suggest "intronsation ou triomphe." A wish for or a reference to the "double prosperity" of an individual occurs in JS 35, 37, 49, 61, 83 (Lihyanite), but this is another matter; it is the Semitic "double fortune," on which see Fr. Cumont, *Études syriennes*, 263.

The epithet *is* strange, and that is its explanation; I suggest that it is obviously an echo of Πτολεμαῖος Θεός, an attempt to reproduce part of the title as well as the name of some Ptolemy.

That may be why it is apparently the only epithet in Arabia which suggests deification. Of course it is often asserted, on South Arabian evidence, that Arabian kings were, speaking generally, gods during life; but the alleged evidence, as regards the Hellenistic period, seems to me, I must confess, very dubious. The inscriptions which make certain South Arabian kings sons of the Moon-god are all post-Christian¹, and may therefore reflect Greek or Roman ideas; and Nielsen's argument² that because the Venus-god, the Moon-god's son, was called Malik "the king," therefore the kings were the Venus-god, cannot be valid; Hebrews called Yahweh "king," but their kings were not Yahweh. Names compounded with Wadd³ of course no more import divinity than Apollonius or Dionysius; while titles like Just and Illustrious⁴ mean nothing, unless we know *aliunde*, as we do for the Ptolemies, that these kings were in fact worshipped by these names. The best piece of evidence in this connection seems not to have been noticed—Agatharcides' statement that the Sabaeen king might never leave his palace, and if he did he was stoned; that is, he was a god-king under a well-known *tabu*⁵. But that the Sabaeen king was a god does not affect Liḥyan, for you cannot argue from one kingdom to another; the Antigonids were not gods because their cousins the Seleucids were, and the reference in JS 82 to the "strong government" of Lawdān is conclusive, for example, that the Liḥyanite kings were not under the same *tabu* as the Sabaeen. There seems at the moment no trace of deification in Liḥyan; and "the celestial Tolmai" is an isolated phenomenon calling for explanation on other lines, which I have tried to give.

From Al-'Ula doubtless came the Minaean Zaidil who became an Egyptian priest in some Serapeum and kept the temple supplied with myrrh and calamus through his own trading ship; the inscription on his sarcophagus is dated in the twenty-second year of some Ptolemy⁶. Dérenbourg⁷ suggested Ptolemy III; Rhodokanakis rather favours Ptolemy II, 263, as does Hommel⁸. In either case his presence in Egypt was a direct result of the expedition of Ptolemy II and is of great interest as illustrating the connection between Egypt and Al-'Ula; doubtless the "Minaean frankincense" mentioned in Egypt later in the reign of Ptolemy II⁹ came by the same route, from Al-'Ula to Myos Hormos. Whether the Minaeans, including another Zaidil, who appeared at Delos in the latter part of the second century B.C.¹⁰ came from Al-'Ula or Ma'an cannot be said; but with Al-'Ula may perhaps be connected the Minaean imitation of an Alexandrine tetradrachm now at Aberdeen University¹¹. There was too another way in which influence at Al-'Ula might have been useful to the Ptolemies, apart from tapping the South Arabian trade; Egypt required and imported horses, while Dedan exported a picked breed¹². We

¹ Nielsen, *op. cit.*, 254.

² *Ib.*, 233.

³ Hommel, *Ethnologie*, 140–1.

⁴ On which Hommel bases the deification of the kings; see his list of such epithets in Nielsen, *op. cit.*, 68.

⁵ *G.G.M.*, I, 189 (both Photius and Diodorus)=Strabo, XVI, 778. Greeks had met with similar *tabus* before (Xenophon's Mossynoeci). See Sir J. G. Frazer, *The Golden Bough*, III, 124.

⁶ N. Rhodokanakis, *Die Sarkophaginschrift von Gizeh*, in *Zeits. für Semitistik*, II, 1924, 113.

⁷ *Journ. as.*, IX, 1893, 528.

⁸ Rhodokanakis, *op. cit.*, 126, n. 6.

⁹ *P.S.I.*, VI, 628.

¹⁰ Ch. Clermont-Ganneau, *Inscription bilingue minéo-grecque à Delos*, in *C. R. Ac. Inscr.*, 1908, 546.

¹¹ G. F. Hill, *Brit. Mus. Coins, Arabia*, 1922, lxxxii.

¹² Ezekiel xxvii, 20 (LXX): Δαῖδαν ἔμποροι σου μετὰ κτηνῶν ἐκλεκτῶν εἰς ἄρματα. Whatever the Hebrew means, the LXX translators when in doubt sometimes interpreted the matter by the conditions of their

cannot however ascribe to this expedition the introduction of the camel into Egypt, if it was Ptolemy II who introduced it, as camels are mentioned in the procession of 279-8.¹ Finally I may note the interesting suggestion that Zaidil's sarcophagus came from the Fayum²; for a recent papyrus has shown that at Philadelphia in the Fayum in 250 Ptolemy had a body of Arab guards, possibly used to police the desert³.

Zaidil's sarcophagus does not actually help to date the beginning of the Lihyanite kingdom, as there were Minaeans at Al-'Ula under the Lihyanites; but if there were really Ptolemaic influences at work in that kingdom, it cannot begin *later* than about 200 B.C. (quite apart from the Hereibeh statue and Mas'udu's inscription), because by about 100 B.C. the Ptolemies were probably losing interest in Dedan and peninsular Arabia (*post*). It might in fact begin anywhere between 280 and 200: and it is tempting to see in the change of rulers at Al-'Ula some ultimate by-product of the activities of Ptolemy II. As to the country northward, the position in the third century was, I conjecture, that the Shalamians still occupied the country about Teima, between Al-'Ula and the Nabataeans, with whom at some time they were allied⁴; then the Nabataean advance absorbed the Shalamians, who became part of the Nabataean state, with the same *sacra*⁵; finally, before c. 100 B.C., the Lihyanites, perhaps with Egyptian support, checked the Nabataean advance, which for long (as the Nabataean inscriptions show) got no farther than Hegra. The surviving reference to the "strong government" of the Lihyanite king Lawdān, who had a long reign⁶, might refer to this event.

I come at last to the Milesian colony of Ampelone⁷. The strange but widespread idea that it belonged to the seventh century B.C. hardly requires mention; Miletus then had about as much chance of founding a colony in the Red Sea as in the moon, and the only time when a Greek colony could have been founded in Arabia was under the Ptolemies. What happened is shown by the analogy of the already noticed Seleucid foundation, Antioch in Persis. Antioch did not flourish, and Antiochus I applied to Magnesia on the Maeander to re-colonise it for him, which Magnesia did with success; the story is told in the decree of Antioch found at Magnesia⁸. Magnesia also colonised Antioch toward Pisidia for some Seleucid⁹; doubtless other cities helped the Seleucids in the same way. Similarly one of the Ptolemies applied to Miletus to colonise a city for him in Arabia. Hence the name Ampelone, city of the vine, so strange in a Milesian foundation, seeing that the god of Miletus was Apollo; Ampelone adopted Dionysus because he was the divine ancestor and god of the Ptolemies. Miletus was under Ptolemaic suzerainty from 279 to 258, when it was lost to Antiochus II: it was recovered by Ptolemy III between 245 and 241 and remained Ptolemaic till 197. But the reign of Ptolemy IV, and the latter part of that of Ptolemy III, when he was quite inactive, may be left out of count:

own age, notably in this chapter. Ezechiel was seemingly translated in the second century B.C. I cannot reconcile with this verse the widespread belief that the horse was unknown in Arabia before the Christian era.

¹ Athen. v, 200 F, apparently the earliest mention of them. They occur a little later in *P. Cairo Zen.*, 59143, 59207; *P.S.I.*, vi, 562.

² Brugsch's suggestion, which Rhodokanakis, *op. cit.*, 119, thinks possible.

³ *P. Cairo Zen.*, 59296.

⁴ *ἑνσπονδοί*, see Steph. Byz. s.v. *Σαλάμιοι*. Cf. Hartmann, *op. cit.*, 464. I know of nothing to support the view of Moritz, *op. cit.*, 42, that Al-'Ula was once Shalamian.

⁵ *C. I. Sem.*, II, 1, 197, 199, 206.

⁶ JS 82 (in his 35th year).

⁷ Pliny, *H.N.*, vi, 159, oppidum Ampelone, colonia Miletorum.

⁸ *O.G.I.S.*, 233.

⁹ Strab. XII, 577: *ταύτην ᾤκισαν Μάγνητες οἱ πρὸς Μαυάνδρῳ*.

Ampelone was founded either under Ptolemy II or early in the reign of Ptolemy III, and as we do not know that Ptolemy III was ever active in Arabia, while Ptolemy II was, we must ascribe the foundation to the latter. It was founded therefore after his expedition of 277 and before c. 260 (the second Syrian war); that it was a consequence of that expedition can hardly be doubted. Through it Ptolemaic influence would pass up to Al-'Ula, and from it South Arabian and Indian products coming to Al-'Ula over the incense route would be exported to Egypt. Glaser, merely from geographical considerations, put Ampelone in the Hedjaz somewhere north of Jiddah¹, and was not far wrong; it must have stood about the mouth of the Wâdi Hamd, whence an easy route runs to Al-'Ula and whence there was an easy ferry across to Myos Hormos. Doubtless it would tend to supersede the old Minaean port of Egra, which by Augustus' time had sunk to a village². The Arabs whom Ptolemy II was ruling before 270³ may have included some coastal tribe here, to secure Ampelone's communications with Al-'Ula.

One further matter of analogy. We have seen how the Seleucids colonised round the inner Persian Gulf. So did the Ptolemies round the upper part of the Red Sea; beside the African foundations of Ptolemy II,—Arsinoe, Philotera, Myos Hormos, Berenice, Ptolemais Epitheras,—and the Arabian Ampelone, some Ptolemy seemingly took Ezion-geber in Nabataean territory near Aelana and refounded it as a Berenice⁴; it is tempting to think of the campaign of Ptolemy II against the Nabataeans in 278. The two efforts corresponded, as one would expect. Now the great trading power on the Persian Gulf was Gerrha, and it was the wealthy Gerrhaeans who supplied Seleuceia with incense etc.⁵; apparently the Seleucids maintained good relations with them, and even Antiochus III, when he set out to conquer Gerrha, yielded to the people's prayer that they might keep their ancient freedom⁶. Ptolemy II was much keener about trade than any Seleucid, and we should expect an effort on his part to get some Arabian people to do for him what the Gerrhaeans did for his rivals. It was certainly not Petra which balanced Gerrha; and I think that Gerrha's counterpart in the west was Dedan, which, first in Minaean and then in Lihyanite hands, assisted to supply Egypt and felt Egyptian influence.

Perhaps this may explain a (to me) very puzzling passage in Agatharcides: that the Gerrhaeans brought incense to Petra⁷. One is apt to look on Petra as *the* great incense mart; why should the Gerrhaeans have carried coals to Newcastle? How could it pay them, after their already long journey from the Mahra coast through Oman to Gerrha, to bring their incense again across Central Arabia, probably via Teima, to the Nabataeans? Certainly Petra was already a mart in the fourth century⁸. But its greatness probably only dates from about the first century B.C., when the Ptolemies were relaxing their

¹ *Skizze*, II, 152.

² Strab. XVI, 782. It would be tempting to see in Ampelone Egra hellenised, the old name (as so often) ultimately prevailing. It seems however more likely that Ampelone was Leuce Come; and as Leuce Come and Egra co-existed (*ib.*, 780, 782) it could not be both.

³ Theoc. XVII, I, 86.

⁴ Josephus, *Ant.*, VIII, 6, 4; see Tscherikower, *op. cit.*, 81. This has been doubted, but is usually accepted.

⁵ Strab. XVI, 766: they go regularly to Babylonia.

⁶ Polyb. XIII, 9, 4-5. J. Beloch, *Gr. Gesch.*, IV², II, 357, deduced from this passage, wrongly as I think, that the Gerrhaeans were tributary. Of course they gave Antiochus a present for leaving them alone; so did the Nabataeans in 312 to Demetrius, Diod. XIX, 97, 6.

⁷ Strab. XVI, 776; *G.G.M.*, I, 177 (both Photius and Diodorus). Diodorus adds "so they say."

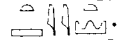

⁸ Diod. XIX, 94, 5; 95, 3.

efforts; in the third century the Ptolemies may have been able, through their friendship with Dedan, partially to starve Petra by diverting part of the incense-route traffic to the sea and so to Egypt direct. This would explain the amazing journey which the Gerrhaeans found worth while: they turned Egypt's flank.

By about 100 B.C. the Ptolemies, with their successful penetration to Somaliland, the growth of their sea-traffic, now shyly reaching out toward India, and their increasing political weakness, may have been attaching little further importance to their connection with Dedan; while, looking at what was happening in Egypt and elsewhere, Ampelone may have been fast becoming orientalised. On the other hand, the Nabataeans, now a civilised state, were expanding greatly; in or before the first century B.C., perhaps by absorbing the Shalamians, they occupied Teima and reached Hegra, not far north of Al-'Ula, for long their stronghold and their boundary¹. Whether at the time of Aelius Gallus' expedition the Lihyanites may have been their tributaries I am not here considering; Al-'Ula itself they seem not to have actually entered till much later². But down the coast they made more progress, and their port of Leuce Come, also at the mouth of the Wâdi Hamd³, replaced and killed Ampelone; it had direct communication with Iathrib (Medina) and so cut out Al-'Ula. Probably Leuce Come *was* Ampelone, captured and re-named. For certainly, as against the Ptolemies, the Nabataeans had the last word, as the children of the soil are apt to have. Ptolemy II from Heroopolis had sent out his fleet to chastise them and cut their trade route; if they knew their own history, they must have felt that the gods were good on the day when, near Heroopolis, they burnt the last fleet of the last queen of Ptolemy's line.

APPENDIX I. *T-sh-y-t*.

The following is from a letter written to me by Mr. Sidney Smith. He had no idea when writing whither I meant to conduct Ptolemy II, so the coincidence is rather striking. After alluding to a mention in Lawrence's *Seven Pillars*, 113, of the Tasha pass, near Wâdi Safra, a wâdi which "reaches the coast half way between Yenbo and Rabegh," running from N.E. to S.W., and concluding that this pass "must lie north of Wâdi Safra in the hills," he says: "Tasha is then a good geographical name just by Yenbo." As to the Arabic form, "I have found a name in Yaqût which does bear on the matter, owing to help from Mr. Fulton of the Oriental MSS., who translated the relevant passage for me. It appears that there was a mountain in Yemen, variously called Tais or Taish. The word, according to Yaqût, denotes a goat; the Hebrew cognate Tayish means a buck or he-goat, and that is probably the original sense: the Arabic dictionary gives *tais*, pl. *tuyus*, buck. The mountain then was the 'Goat Mountain.' Such a name may originally have spread over the whole area of the hills which lie just east of the sandy shore of Yemen and Hedjaz, the Tehama.

"If we turn now to the Egyptian spelling, Budge (*History of Egypt*, vii, 201) gives the hieroglyphic form as . The final *t* was silent and corresponds exactly to the feminine *t* of Arabic, used to denote generic significance, 'the class of....' The modern German transliteration of the word would be something like *T-šy-i*. [Köhler used Tsii, W.W.T.] Now occasionally such signs as , *i*, are put out of place to secure better sign grouping. It is conceivable that the name was really *T-i-šy*, or something like Taish.

¹ Jaussen and Savignac, *op. cit.*, II, ix, and the Nabataean inscriptions from Hegra.

² The first Nabataean inscriptions at Al-'Ula seem to be *C. I. Sem*, II, I, 333, 386, dated (by the era of Bostra) 306 + and 307 A.D.

³ B. Moritz, *Λευκή Κώμη* in *P. W.*, 1925.

In any case there is no reason to deny that the Egyptian *might* represent 'Buck-land.' Such a name would only apply to the hill country east of the Tehama. If we wish to localise it strictly, it may either be in the neighbourhood of Yenbo, or in Yemen."

Assuming that the name might apply to the whole of the hill-country behind the Tehama, including that north of Yenbo, it fits excellently with what I have suggested. I note just two points. No one knows how far south the rule of Al-'Ula extended, and the expedition might, incidentally, have reached some point a good deal farther south than Al-'Ula itself: if the whole of the mountainous country behind the coast was known as Teshi, an Egyptian scribe was quite capable of suggesting that Ptolemy went to the farthest end of it ("to the end of the South") when in fact it was the nearer.

APPENDIX II. THE LIHYANITE KINGS.

The kings now known seem to be the following:

Hanu'ās son of Sahir queen of Lihyan. JS 53.

The "celestial" Tolmai son of Hanu'ās. M. 4 = JS 54.

Tolmai son of Hanu'ās king of Lihyan. M. 9, 27 = JS 45, 77 (22nd year known).

Hanu'ās (5th year). M. 71.

Hanu'ās son of Tolmai king of Lihyan (5th year). M. 73.

Lawdān son of Hanu'ās king of Lihyan (35th year "under his strong government"). JS 82.

Tolmai son of Lawdān king of Lihyan. M. 63.

Musimm son of Lawdān king of Lihyan (9th year). JS 85.

A nameless king. M. 78.

Multaqis (29th year). JS 83.

Hilās, successor (but not son) of Fātim. M. 52 = JS 70.

Kabir'il son of Mata'il king of Dedan. JS 138 (in Lihyanite).

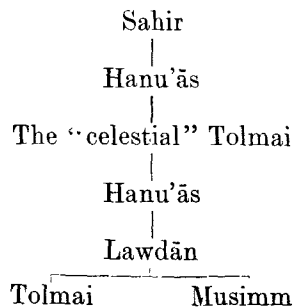
Mas'udu king of Lihyan. JS 334 (p. 220), 337 (in Nabataean).

? Salhān. M. 55 = JS 68.

? 'Abdon Hanu'ās. M. 23 = JS 72.

? Musimm son of Sahar. JS 349.

It is uncertain whether the last three are kings or governors under some king. It may be uncertain whether Tolmai son of Hanu'ās and the "celestial" Tolmai son of Hanu'ās are the same person, *i.e.* whether there are two, or three, kings called Tolmai. There may be two, or three, kings called Hanu'ās; even five is possible, but improbable. The least number of kings one can possibly make is 13, the greatest (taking three called Hanu'ās) 19. The queen, Sahir, doubtless comes early; for no other queens seem known in Arabia (Tkač, *Saba*, 1500) except those of the Aribi in the last period of Assyrian influence (S. Smith, *Camb. Anc. Hist.*, III, 63, 84); unless the "queen of Sheba" be counted. To make out the minimum number, 13, a pedigree could be constructed thus:



But of course the linking up between the first two and the last four is entirely hypothetical, apart from the fact that seemingly Mas'udu belongs somewhere in the second century B.C.

Multiplied by 30, this would give 390 to 570 years for the Lihyanite kingdom, plus an unknown period for undiscovered kings. The larger figure is probably impossible, and in any case multiplication by 30 is not a scientific procedure; it may work occasionally (*e.g.* the first seven Ptolemies), but suppose all the known Seleucids multiplied by 30; the result would indeed be disastrous. I think my statement in the text, that we now require three to four centuries for the Lihyanite kingdom, is a reasonable sort of estimate.

SCENES FROM A DESTROYED TEMPLE AT NAPATA

By F. LL. GRIFFITH

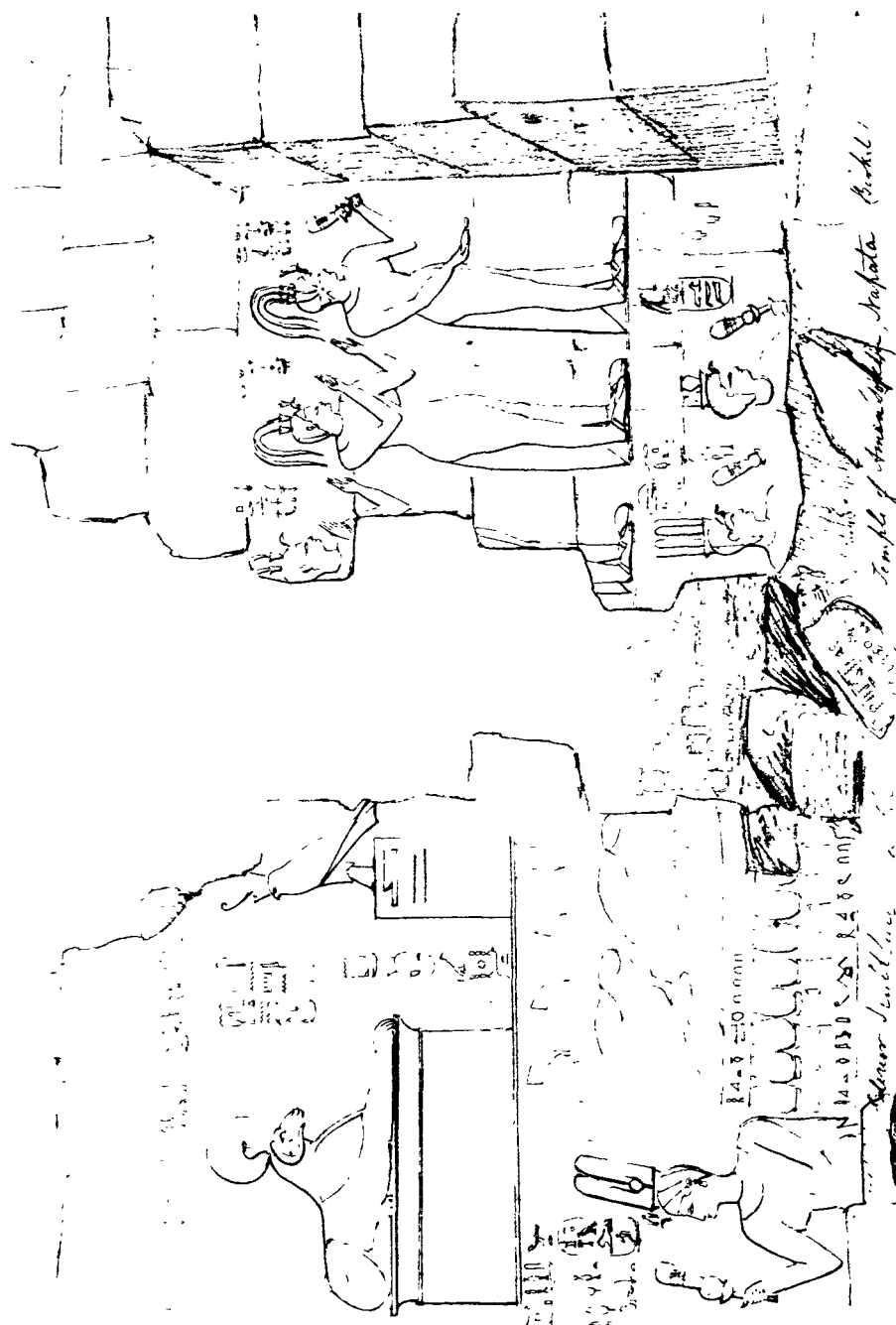
With Plate v.

The excavations of Dr. Reisner have established the fact that a certain small temple (H of Lepsius, B 700 of Reisner¹) under the rock of Gebel Barkal was built (apart from a New Kingdom predecessor and a Meroitic successor) by Atlanersa, the third (?) Ethiopian king after Tirhaqa, and in part, at least, decorated by Atlanersa's immediate (?) successor Senqamenseken. A fine altar of Atlanersa was amongst the discoveries made (see *Journal*, v, 104), but of sculptured walls and columns only scraps could be found. Travellers a century ago record that the two towers of the pylon were then standing above ground, more or less ruined, apparently with the beginnings of both the east and the west walls attached. In 1820 Cailliaud copied the very ordinary scene of the king, in this case Senqamenseken, slaying his enemies before Amūn from the front of the eastern² tower, which was the better preserved of the two (*Voyage à Meroé*, I, Pl. lxi, cf. *Texte*, III, 217). The god here offers the king a scimitar terminating in the head of the Amūn-ram with disk, and the imperfectly copied inscriptions yield a phrase in the speech of Amūn, "I have given thee a scimitar on the day of battle" (𐩣𐩢𐩨𐩠), which occurs also on a fragment of a small obelisk of the same king found here by Reisner (see *Journal*, v, 108). Senqamenseken would seem to have had some serious fighting to do. The sculptures are briefly noticed by Waddington and Hanbury, who were at Barkal just before Cailliaud (*Journal of a visit to some parts of Ethiopia*, 166-167), and again in more detail and with some understanding of the hieroglyphics by Hoskins, whose visit was in 1833 (*Travels in Ethiopia*, 140-141). On Pl. 23 Hoskins gives a drawing of the inner (north) face of the same eastern tower, in which the engraver has made some ordinary sculptured figures appear as if fitted on to the building in a different material, but the shapes are correct. Five years earlier however, in 1828, Lord Prudhoe had visited Napata accompanied by Major Orlando Felix, who shared with him a knowledge of hieroglyphics that was very respectable for that early time, and to Major Felix we owe an interesting record in pencil, here reproduced. It is taken from Atlas (A), fo. 37 (a) of the Prudhoe MSS. preserved at Alnwick Castle, the journals of Lord Prudhoe and the drawings of Major Felix so far as they relate to Egypt and Nubia having been most kindly lent to us at Oxford by the Duke of Northumberland for the making of Miss Porter's and Miss Moss's *Topographical Bibliography* and other work.

The drawing (Pl. v) is labelled by the artist "Interior Sculpture on the Temple of Amen-soken, Napata (Birkel)." On comparing the plates of Cailliaud and Hoskins (Pl. 23 and Pl. 25), it is evident that the left-hand fragment in Felix's drawing corresponds to the ruin of the east pylon tower as shown in the two former, and that the north face of both towers is shown having the figures of the worshippers turned from the entrance towards the interior.

¹ *Journal*, v, 101.

² According to the magnetic compass, not the reversed river-compass employed by Dr. Reisner in his description of the remains at Barkal.



Sculptures on the inner face of the pylon of Atlantesa.
 Drawn by Orlando Felix, 1828.

The space between the two parts, where the door originally stood, is very much abbreviated in the drawing, no doubt in order to gain room for large-scale detail on a sheet of limited size. In that interval is a neat little glimpse of columns and of the second pylon of the Great Temple, which were probably more or less in view through the gap of the doorway, and at the foot are the cartouches of Amaniseken, perhaps as seen together on some fallen block. Hoskins too (p. 141) found the same name somewhere on the north of the pylon. Cartouches were of course in those days the chief quarry of the Egyptological huntsman amongst the inscriptions, if he did not aspire to being a Champollion. But although Senqamenseken sculptured the front of the pylon and Dr. Reisner found his name as well as that of Atlanersa in the scattered remains throughout the temple, it seems to have been the earlier king who decorated the north face of the pylon, for it is his Hawk with Horus name Gerg-tawi that faces the recumbent criosphinx of Amūn on the eastern tower. Thus Atlanersa was responsible for building the whole of the temple (unless the portico was later, see Reisner's plan, *Journal*, v, Pl. x, No. 701), and Senqamenseken's work was confined to the decoration.

The edge of the paper on the left seems to cut short the scenes and inscriptions, but it probably only marks the line where the east wall of the hypostyle court met the pylon, and the continuation of the subjects on that wall was probably much destroyed. The beginning of the corresponding west wall is seen attached to the west pylon tower on the right.

The first thing visible above the rubbish on the floor of the chamber (702 of Reisner) is the upper part of a scene of offerings. On the east wall must have stood the king offering to Amūn: here we see the queen following him holding a sistrum, her long titles confused in the copy but ending "great royal [wife] Khalēsi." This name, meaning "Slave of Isis," is new. Behind her are indicated bunches of onions (?), four sacrificed oxen, a row of jars on wooden stands with inscription "forty *cash*-jars of beer," and below these an inscription "leeks and melons (?), 100; beer, 150 (?)."

On the upper level, between the royal hawk of Atlanersa and the criosphinx of Amūn already referred to, is an inscription: "Speech of Amen-rē in the midst of Pnubs: 'I have given unto thee all life and good fortune, all health, all happiness for ever and ever'." For the criosphinx Amūn of Pnubs, usually represented with the *nubs*-tree bending over it, see *Journal*, iv, 26 = L., D., v, 9 from the temple of Tirhaqa at Napata, and *Liverpool Annals*, ix, Pl. xlix from the temple of the same king at Sanam.

Over the scene is a single line of inscription:

"...silver; he set up for him an obelisk in the Great Place, he added (?) an endowment of the deity (?)." This reminds us of the little black granite obelisk of Senqamenseken, 19 cms. ($7\frac{1}{2}$ inches) square in section, of which Dr. Reisner found a portion just behind the pylon.

It is probable that there was no further sculpture above this and that the upper part of the tower was left blank at the back like the front as drawn by Cailliaud.

Turning now to the western tower we see above the rubbish the heads of two females holding sistra. The leading one with indistinct headdress is the "king's mother ...selketh (?)." Behind her is a queen "Ta...(?)." In the upper row are three more royal ladies. The leading one holds a sistrum and a vase (?); she is entitled "king's wife, king's daughter, king's sister, Aru." The other two, "king's wife, king's daughter, Neb..." and "king's [wife?], king's sister, Persenen," raise empty hands in worship.

The headdresses of the three ladies last mentioned are very peculiar and afford a welcome confirmation of one worn by a princess from Aspelt's chapel inside Tirhaqa's

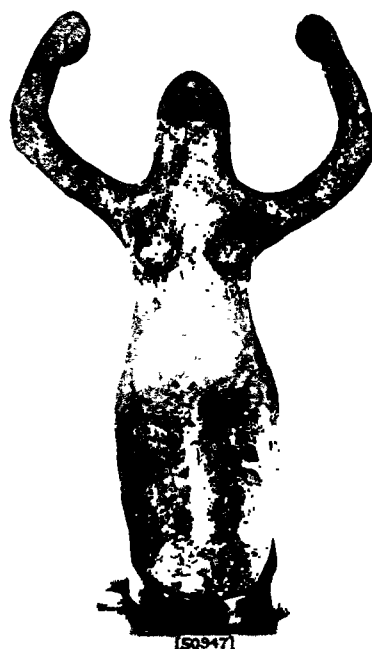
temple at Sanam on the opposite bank from Napata. This is published in *Liverpool Annals*, ix, Pl. xlv from a sketch of Lepsius. Aspelt was the third (?) successor of Atlanersa according to Reisner in *Journal*, ix, 75. It may be remarked that the sculptures in Aspelt's chapel are of the shallow bad style of engraving found by Reisner along with relief work in Atlanersa's Barkal temple. It is probable that what look like bent wires in Lepsius's drawing are really delicate plumes set in calyx bases, but perhaps Dr. Reisner will one day produce a more certain explanation of the headdress from his researches among the royal cemeteries. It will be noted that at Barkal the leading princess wears three plumes and the second only two, while at Sanam, where the head of the leading lady (presumably the queen herself and therefore with a quite different headdress) is destroyed, the princess behind her wears four plumes. Probably the number of plumes varied with the rank of the wearer.

Remarkable flowing gear that may perhaps be connected with this Ethiopian headdress of the seventh century B.C. is seen on the head of an unnamed goddess sculptured on one of the Meroitic columns that used, alas! to stand at Amâra, L., D., v, Bl. 69, col. b, the figure being well visible in a photograph in Frith, *Upper Egypt and Ethiopia*, 32 and drawn by Wilkinson, MSS., xi, 17, in 1849; and again on a sculpture published in my *Meroitic Studies*, III (*Journal*, iv, Pl. v), where the goddess is named Taley or Talekh and acts the part of a winged Victory. These belong to the Natekamani royalties and are therefore probably of the end of the first century A.D.

Above the princesses is faintly pencilled a row of three small figures turned in the same direction, who may represent priests or common people assisting at the ceremony in which the royal family is shown in full prominence.



1



2



3



4



5

Predynastic figures of baked clay.

1 & 2. B.M. 50,947. *Scale c. 1/2.*

3 & 4. B.M. 53,875. *Scale c. 1/2.*

5. B.M. 50,687. *Scale 1/2.*

PRE-DYNASTIC FIGURES OF WOMEN AND THEIR SUCCESSORS

By G. D. HORNBLOWER

With Plates vi-x.

From the earliest Predynastic to the late Roman times figurines of nude women have come to light from all parts of the ancient Egyptian field. Often labelled as "dolls," they compose really a mixed class which it shall be my endeavour in this article to sort out: at the same time I shall attempt to give a rational account of their origin and various developments through the ages.

One of the most interesting kinds is composed of the so-called steatopygous clay figurines of the Early Predynastic Period, of which the British Museum has so remarkable a collection, and I can do no better than begin with them. I am indebted to the courtesy of the Museum authorities for facilities granted for examining them and for permission to publish the most characteristic.

The Museum numbers, the composition and dimensions of the figurines selected are as follows:

<i>Pl.</i>	<i>Fig.</i>	<i>Museum No.</i>	<i>Composition</i>	<i>Height</i>	<i>Width</i> (<i>across elbows</i>)
vi	3 & 4	53875	Clay and vegetable paste	14 $\frac{3}{4}$ in.	7 in.
vi	5	50687 (male)	Baked clay	4 $\frac{3}{4}$ "	3 "
x	2	53879	" (reddish)	4 $\frac{3}{4}$ "	2 $\frac{3}{4}$ "
vii	2	50689	" (base blackened in firing)	3 $\frac{1}{4}$ " (sitting height)	3 $\frac{1}{8}$ " (horizontal length)
vi	1 & 2	50947	"	8 $\frac{1}{2}$ "	5 $\frac{3}{4}$ "
vii	4	50680	Soft limestone	7 $\frac{3}{4}$ "	6 $\frac{3}{4}$ "
vii	3	58064	"	12 $\frac{1}{2}$ "	9 $\frac{3}{4}$ "

The two last are decorated with lines and figures, to be described later; detailed description of the rest is made unnecessary by the accompanying illustrations, since the figures are of rough and primitive make, nearly all without facial features.

Comparison should be made with those in the University College collection, published in Petrie's *Predynastic Egypt*, Pls. iii-vi, and the fragments in the Ashmolean Museum published by Capart (*Débuts de l'art en Égypte*, figs. 113-114). The Sequence Dating given for the only two found in datable graves is the early one of 31-34 (*Predyn. Eg.*, par. 18), contemporary with the white-on-red pottery which characterizes that period.

The first appearance, so far known, of nude female figurines of the type illustrated is in the Upper Palaeolithic age of Europe. Of these a highly characterized example, the so-called "Willendorf Venus," is reproduced, for comparison, in Pl. viii, figs. 1-3. The immense breasts and thighs are strikingly like those of the painted clay figurine, of the Early Predynastic age, described in *Naqada and Ballas*, 13 and Pl. vi, 1, and here reproduced in Pl. viii, fig. 4, by kind permission of Sir Flinders Petrie. The representation of

faces in the palaeolithic figurines is evaded, as it is in most of the Egyptian ones, but nos. 50689 and 53879 show some power of representation, which may have been stronger in that age than is indicated by the figurines, just as, in the somewhat similar figurines of the Eighteenth Dynasty, when representational art was particularly strong, the "beak" still stands for a face (see Pl. ix, figs. 1-2)¹. It is interesting to see how nearly the covering of the face with hair in no. 53875 (Pl. vi, fig. 4) resembles the complete veiling in the "Willendorf Venus." An example from Hû now in the Ashmolean Museum has the same characteristic.

A prominent feature of the figurines is their so-called steatopygy, but Mr. G. Shattock tells us in his classical work on that peculiarity² that "the term Steatopygy should not be used to cover enlargements that are lateral only, or conditions where the thighs alone are large." The name is properly applied to the peculiar formation of the buttocks found at present among the Korânnâ women of S. Africa³. True steatopygy, accompanied by general obesity, is to be seen in the Queen of Punt⁴, who suffers also, as Mr. Shattock observes, from *lordosis*. A vessel in the shape of a truly steatopygous woman, also afflicted with *lordosis*, is shown in *El Amrah and Abydos*, Pl. I, but this is exceptional and may have well been inspired by the figure of the Queen of Punt, which it closely resembles and which must have been well known at that time.

The broad hips of these predynastic figurines do not, then, constitute steatopygy, nor, as Mr. Shattock shows, do similar ones in the art of palaeolithic Europe, ancient Mesopotamia, Crete or early European cultures⁵. They have not the gluteal gibbosity of the Korânnâ women, which is composed of a loose reservoir of fat, to be absorbed for nutrition in case of emergency, like the camel's hump. It would seem, then, that the figurines, remarkable only for obesity and not steatopygy, offer no ground for instituting comparisons between the ancient peoples concerned and modern Bushmen, nor can they be adduced as proofs of any racial connections whatever. Professor Fleure⁶, supporting this view, prefers the conclusion that the exaggerated features shown in the palaeolithic figurines have simply a ritual signification; they are found in caves, as are the figures of bisons and other wild animals, and were made for purposes of magic, to promote fertility in the women of the race; with this object models were chosen for the richness of their motherly physique, which was purposely exaggerated⁷. Their function is parallel to that of the wild animals in the ritual caves, modelled or painted on the

¹ In a private collection; given to show fuller detail than is generally published. The crudeness of the modelling may possibly be due to the survival, in it, of a popular traditional type, for it is found equally in the figurine placed in a temple foundation-deposit at Koptos (see p. 41).

² "On Normal Tumour-like Formation of Fat in Man, etc.," in *Proc. of the R. Soc. of Medicine*, 11 (1909), *Pathological Section*, 207.

³ Usually attributed to Bushwomen, but the late Professor E. Schwarz, who has lived and studied among them, told me, as others too have noted, that it is found only among the Korânnâ women, who are of Hottentot race. The gluteal prominence is composed of soft fat and is often so great that rising from sitting is a difficult process. But of course we must bear in mind that Bushmen drawings show this feature in their women; the Korânnâ may have in them an old Bushman strain.

⁴ *Deir el-Bahari*, III, Pl. lxix; for a photograph see Shattock, *op. cit.*, 217, fig. 4.

⁵ Two exceptions are noted by him, *op. cit.*, 220, both in Crete; but later finds in Europe have produced figurines showing something very like steatopygy, see Peake and Fleure, *Priests and Kings*, 160 and 164, figs. 99 and 101, dated at about 3000 B.C.

⁶ *Harnsworth's Universal History*, Pt. 2, 200, fig. 5.

⁷ For a good summary, with illustrations, see Sollas, *Ancient Hunters* (2nd ed.), 373-381, and Peake and Fleure, *Hunters and Artists*, 92.

walls, whose object was to procure good hunting. One of the figurines, the "Venus innominata" from Brassempouy, is a beautifully carved torso of a woman, quite normal but markedly pregnant, a significant feature¹.

We may then safely give to these great-breasted, broad-hipped women the name of "mother-figures," without committing ourselves to any definite theory as to their position in the minds of the people using them; we do not know whether they were worshipped, in the modern sense of the word, but we can be sure that these mysterious instruments of family or tribal prosperity, fraught with marvel and awe, were deeply venerated and well on the way to becoming what we call deities.

With fertility we must link nourishment as an attribute of the mother embodied in these figurines, to denote which they were usually furnished with breasts of generous size, and, when arms were provided, as was not always done, they usually supported the breasts. All these traits are vigorously exemplified in the "Willendorf Venus."

With the coming of agriculture and domestic beasts the functions of the figures changed; no longer were they needed to promote increase in the hard-pressed hunter's family nor are they found in ritual caves, but are placed in graves to procure nourishment and motherly care for the lonely dead. The exaggeration of bodily traits mostly disappears; it is not seen in the two earliest examples so far known, the rough burnt-clay figurines discovered in the First Stratum of Susa² and the similar one unearthed at Ur last winter by the Joint Expedition of the British Museum and the Museum of the University of Pennsylvania, belonging to a culture tentatively attributed by Professor Langdon, in the case of his similar finds at Kish, to a pre-Sumerian race. These may be counted as undoubted descendants of the palaeolithic type³ and also the direct ancestors of the well-known mother-goddess of Mesopotamia and the Eastern Mediterranean area.

The figurine from Ur was found in a burial-place and is of a funerary nature, like those of Ancient Egypt or its descendants in Europe⁴. Whether at this time the mother-figure had attained the status of godship and was worshipped in shrines we cannot say; our present knowledge yields no certainty till we come to the temple of Nin-khur-sag at

¹ See Sollas, *op. cit.*, 380, fig. 207 *b* and *c*, and 376, fig. 203 *c*. "La Fillette" and "Figurine à la ceinture" from the same district have no definite features, representing, in a summary fashion, women of ordinary type, but "La manche du poignard" has the usual exaggeration.

² *Mém. de la Dél. en Perse*, VII, 11, fig. 1. In the Second Stratum at Susa figurines of the usual type of mother-goddess are common; see Contenau, *La déesse nue babylonienne*, Paris, 1914, fig. 59. This work should be consulted also for a general account of this deity in the historical period. An excellent illustration of the Babylonian type is given in *The Cambridge Anc. Hist.*, Plates, Vol. I, 71 (*a*).

³ There is an intermediate stage in the Epipalaeolithic period, in Spain (Almeria, Cogul, etc.), see Obermaier, *Fossil Man in Spain*, 232, and figs. 103 and 359; also Breuil in *L'Anthropologie*, XXIV, 8, fig. 8. The culture in which these occur is now shown to have a probable connection with that of Egypt in the Early Predynastic period (see p. 33, n. 3).

⁴ The mother-goddess of the Neolithic period is usually considered to have come from Mesopotamia or from Western Asia through the Aegean area, reaching Europe about the end of the Egyptian Protodynastic age with the Danubian, Thessalian and Tripolye cultures. In France and the British Isles traces of her can still be seen among the standing menhirs. See Déchelette, *Manuel d'archéologie préhistorique*, 583-603, amplified, with some modifications, in *L'Anthropologie*, XXIII, 29-52. For illustrations, see E. A. Parkyn, *Prehistoric Art* (1915), 158 ff. For the Aegean, Perrot and Chipiez, *Art in Primitive Greece*, II, 175-206. For Malta, T. Zammit and C. Singer in *Journ. R. Anthropological Inst.*, LIV (1924), 67-100. In general, with latest facts, Gordon Childe, *The Dawn of European Civilization*, and Peake and Fleure, *Priests and Kings* (Indexes).

She is found in Hittite Carchemish, and at Ephesus the Greeks knew her, in her many-breasted form, as Artemis. In Malta and Europe she seems to have been primarily a funerary deity, protecting the dead.

Al-'Ubaid, in the First Dynasty of Ur¹, but it is worthy of remark that when, in historical times, the worship of the mother-goddess, in her many forms and notably as Ishtar, was thoroughly established, her figure still appears on cylinder-seals, not as a prominent deity, but as a protective charm, sometimes figured as of smaller stature than the gods and men engraved on the seals and often in company with those other protective charms, the bandy-legged dwarf and the sitting ape.

In the dawn of prehistoric Egypt we find her, as in Mesopotamia, a funerary charm. The earliest known examples were discovered at Badârî; one is of ivory and, like a minority of the palaeolithic figurines and a few predynastic Egyptian ones, displays



Fig. 1.
B.M. 50680, front.



Fig. 2.
B.M. 58064, front.



Fig. 3.
B.M. 50680, back.



Fig. 4.
B.M. 58064, back.

no specially emphasized features², but another, of baked clay, has the thin waist and strongly developed hips common to the type and the arms crossed under the breasts as in Mesopotamian figurines.

The type continues in the next age (taking Badarian as of Sequence Date 29) and is exemplified in the stone figurines (Pl. vii, figs. 3 and 4), and others of unbaked clay illustrated in *Prehistoric Egypt* (Pls. iv and v, 1 and 4). These figurines are contemporary with the white-on-red pottery of the Early Predynastic age (Petrie, *op. cit.*, 18) and are decorated with the same kind of designs. The designs on the stone figurines in the British Museum are reproduced in Figs. 1 and 3, 2 and 4: they display just the same characteristics as

¹ L. Woolley, in *The Antiquaries' Journal*, iv, 330 ff.

² See *Ancient Egypt*, 1924, 35, fig. 2, and G. Brunton and G. Caton-Thompson, *The Badarian Civilisation*, 28-29, Pls. xxiv-v.



- Predynastic female figures
1. B.M. 58,066, baked clay. *Scale 1/2.*
 2. B.M. 50,689, baked clay. *Scale 1/2.*
 3. B.M. 58,064, soft limestone. *Scale 1/2.*
 4. B.M. 50,680, soft limestone. *Scale 1/2.*

those described by Petrie, on the arms are bracelets and on the legs anklets—on one figure (50680) there seems to be a band round the thigh (shall we say a “fesslet”?)¹. Four-string necklaces are depicted in both cases, one with beads, one without. The beads are coloured red in no. 58064, probably as being of carnelian, and the string bearing them is green; the band across the nose is black, apparently painted over green, or perhaps under, the green paint showing at the edges; the hair, hanging at the back halfway down to the waist, is black, a good deal restored. There are remains of two black lines over the gluteus, part of a design that has been broken away. The necklace on no. 50680 has no beads, nor are there traces of any colour except a greenish black; the wig and a lump on the beak-nose are made of a black clay-mixture applied to the stone surface; the winged object over the necklaces seems to be intended for a scarabaeus beetle: in the centre of the back is what seems to be a green beetle, which is known later as an amulet and not to be confused with the scarabaeus (see Petrie, *Amulets*, 50, no. 261). In both there seems to have been an effort to represent the eyebrows, but the eyes appear in no. 50680 alone, and the results are not happy. The remaining designs are like those depicted on white-on-red pots, a hippopotamus and other animals, geometrical designs and zigzags scattered about the surface: they probably do not represent tattooing, but figures of magical virtue applied to a funerary figurine in the same spirit as to funerary pots; the designs on the pendent breasts may represent painting in malachite.

The decoration of mother-figures with jewelry is not confined to this age nor to Egypt alone. The red jar of the First Intermediate Period, to be described below (p. 44), has several necklaces, and bracelets and anklets are often shown on nude female figures of the Middle Kingdom; in the latest age such figures are highly bejewelled. Déchelette (*op. cit.*, 586) states that many of the French examples show traces of colour; the woman figure of Coizard wears a necklace which was once coloured yellow, for gold or amber. Examples are also found in the Aegean region².



A stone figurine of white hard-baked clay, similar to those in the British Museum, is illustrated in *Nagada and Ballas* (Pl. lix, 6): it is decorated in the same style, but in both modelling and design is more elegant: its most remarkable feature is that the arms do not support the breasts but are upstretched over the head as in Pl. vi, figs. 1–5. This attitude seems a surprising novelty, but parallels are known in the epipalaeolithic figurines of Spain, a group is illustrated by Breuil in *L'Anthropologie*, xxiv, 8, fig. 8, all highly stylized: some have their arms stretched upwards, some horizontally. These figurines are referred to the Capsian culture which is generally held to have spread to Spain from North Africa: it now seems to be connected with that of the Early Predynastic Period of Egypt, which may be defined as a Libyan branch of the Lower Capsian culture³. The extreme stylization of the Spanish figurines indicates an earlier stage of







¹ This seems a strange ornament, but it is to be seen in terra-cotta figurines of Aphrodite in late classical times; see Franz Winter, *Die antiken Terrakotten*, Bd. III, 2; *Die Typen*, Teil II, 210.

² Perrot and Chipiez, *op. cit.*, figs. 325, 330 and 335, and pp. 183 and 184.

³ See Gordon Childe in *Ancient Egypt*, 1928, 6–7; also J. L. Myres in the *Cambridge Anc. Hist.*, I, 36, and A. Scharff, *Grundzüge der ägyptischen Vorgeschichte*, 14 and 15. The proposed evidence from stone vases is summed up by Brunton, *op. cit.*, 28. The rock-pictures recently discovered in the Libyan desert (D. Newbold in *Antiquity*, Sept. 1928, 261 ff.) find their parallels both in *graffiti* on Egyptian rocks (see Capart, *op. cit.*, fig. 144, and compare marks on predynastic pottery, *op. cit.*, fig. 101) and in figures depicted on white-on-red jars. These may be considered relatives of the figures in hunting-scenes painted in the Cogul rock-shelters, illustrated by Obermaier, *op. cit.*, Pls. xii, xiv and xv, and by Sollas, *op. cit.*, fig. 156, and to them we should add the famous wall-paintings in a tomb at Hierakonpolis (*Hierakonpolis*, II, Pl. lxxv, and Capart, *op. cit.*, fig. 146, which more nearly approaches the completeness

their type not yet discovered; whether they are contemporary with the Egyptian class, or come after or before it, one cannot say, but can only point out the resemblances. It is evident that the outstretched arms have a specific meaning; it was, as I hope to show, the mother's protection and care, symbolized by the arms with which she enfolds her child.

It is generally recognized that the functions of mother-goddesses embrace not only fertility and nourishment, but also protection¹. The symbolism of the arms is probably inherent in some of the Spanish figurines referred to above, but becomes accentuated in Egypt, where we shall find it, I believe, encased in the hieroglyph , as in . It now seems established that the *ka* partook originally of the nature of a guardian spirit; the matter has been well discussed by various authorities and need not detain us here.


With regard to the sign , it is essentially a pictograph indicating action by the two arms, generally in connection with such words as *shn*, *kni* and *inḳ* ("embrace, clasp"), to which it serves as a determinative. In the Pyramid Texts it stands on occasion by itself with the meaning of *shn*, but later it is a simple determinative; its use extends to other words signifying action by the two arms together, such as *sḳ* ("collect"), *hh* ("seek, grope for")², or, in a contrary action, *pgj* ("unfold")³. When, in the earliest texts, it stands alone, it means "embrace" or "clasp," and that is probably its oldest connotation, including, naturally, the notion of protection. A clear instance of this is provided by the formula inscribed on Canopic jars, where  serves as a determinative to *shn* or *kni* in the phrase   =  , etc., "I enfold in my two arms (that which is in me)"; here the formula places the four minor deities, "Sons of Horus," who protect the viscera, under the protection of the four chief goddesses of the Osirian cult. This function of the outstretched arms is strikingly illustrated in the lovely goddess-figures guarding the Canopic chest and its outer case in the tomb of Tutankhamūn⁴. It may be objected that the arms are stretched out horizontally and not over the head, but in a white-on-red dish illustrated by Garstang⁵ two women are depicted with their

of the Cogul scenes. Another point of contact, this time of a magico-religious nature, is probably to be found in the scene depicted on a white-on-red jar in the University College Museum, illustrated in *Predynastic Egypt*, Pl. xviii, no. 74, and a similar one at Brussels (Scharff in *Journal*, xiv, 268, and Pl. xxviii), which may be compared with the well-known Cogul representation of clothed women with a naked man, engaged, it would appear, in a priapic rite (Obermaier, *ibid.*). A fertility rite involving both sexes is perhaps depicted; in parts of modern Egypt the peasants still erect crude mud figures of a man and woman facing each other, with the sex emphasized, for the avowed object of promoting fertility in the crops (see *Man*, xxvii (1927), 152). The smaller figures on the jars seem plainly to represent women; the distinctive organ, drawn stylistically, is shown outside the outline of the figure for the sake of emphasis.

¹ See, for the Aegean regions, Dussaud, *Les civilisations préhelléniques* (1914), 369, and Perrot and Chipiez, *op. cit.*, 203; for Western Europe, Déchelette, *ibid.*


An example, very pertinent, is that of Nin-khur-sag, of whom Mr. C. J. Gadd writes in *Al 'Uba'id*, 146. "The west is the land of the dead in these (the cemeteries of Ur); they are buried about the shrine of Nin-khur-sag, the goddess who was able to rescue them from the underworld"—in fact, so marked is this feature of the goddess that Assyriologists frequently designate her "the Goddess of the Underworld."

² From the *Pyr. Texts*; see Montet, *Scènes de la vie privée dans les tombeaux égyptiens de l'Ancien Empire*, 399. We may also note the dual *shnrci* = "reed-float," which derives its name from the two armsful of reeds composing it (Breasted in *Journal*, iv, 174-6 and 255).

³ See Gardiner, *Grammar*, 445, D. 32.  is used also as a determinative for the word *ḥzm*, "to bow in reverence," as a pictograph showing the attitude of the arms accompanying the bowing (Berlin *Wörterbuch*, s.v. *ḥzm*).

⁴ *Illustrated London News*, Feb. 4th, 1928, pp. 162-4.












⁵ *El Mahâsna and Bêt Khallâf*, Pl. iii, L 209 (*Predyn. Eg.*, Pl. xviii, 1).






arms stretched out horizontally, a survival, probably, of the older tradition as seen in the figurines from Spain¹. (More detailed arguments in support of the above view of the sign  are given in footnote 2 below.)



To sum up, we may conclude that the figurines under discussion are undoubtedly of a protective nature which is probably symbolized by the upstretched arms in the same way as, in the early examples, the breasts, emphasized either by their size or by the pose of the arms, betoken the provision of food for the defunct³. The little contemporary

¹ An interesting parallel is to be seen in the baked clay figurines of nude women found by Pumpelly at Anau in a kurgan of the copper age, some with arms stretched horizontally and some in the usual pose of the mother-goddess, arms across the breast. (*Explorations in Turkestan*, I, Pl. xlvi, figs. 9-17.)

² In the Pyr. Texts, Utt. 222, *shn-wr* seems to be Rêr, "the great protector"; in Utt. 482, 1008 c, Isis is said to *shn* Osiris when she found him "on his side by the banks of *Dit*"; evidently she picks him up and gives him her care.

The sense of protection may also be found in certain sign-groups containing . To begin with the group ; in the Middle Kingdom the  is sometimes reversed, perhaps because the scribes had lost the original meaning and rendered the group as *hm-kt*, "the servant of the *ka*," as modern scholars generally do, thereby making  equivalent to , although in the Old Kingdom the two signs are always distinct; they both referred to action of the arms, whether horizontal or vertical (for the horizontal position could not well be rendered pictographically), but  was from the first reserved for the important *ka* spirit while other words were provided for by . Montet (*op. cit.*, 396 ff.), following Loret (*Sphinx*, xiv, 1916, p. 145), protests against the usually accepted interpretation; he proposes in its place "the servant who carries" (*sc.* "funerary necessities to the defunct"), but this solution unduly narrows the function of the official in question, and, in view of what has preceded, it might be preferable to translate "the servant who protects" or "cares for," *sc.* the tomb, that is, the tomb-warden. Here *hm* has been taken as meaning "servant," but, on the analogy of  and  (see below), the other meaning, "majesty" or "godhead," is perhaps to be preferred; the group would then signify "he who protects the *hm*," *i.e.* the "majesty" or "godhead," a royal attribute applied to the dead, identified with Osiris, as to a king. It will be objected that this interpretation destroys the parallelism with such words as *hm-ntr*, but on the other hand it has a parallelism with  and , in either case the effective meaning is the same, the "tomb-warden."

The group , found in sealings on protodynastic jars (*Royal Tombs*, I, Pls. xx, xxxi and xxxii; *Tombs of the Courtiers*, Pl. iii), has been translated as "the *ka* of the glorified spirit," with the old confusion between  and ; the phrase is hardly reconcilable with what we know of the *ka* and the *sh*, and it is difficult to see how it could be used for an official seal. However, some recent researches made by Sethe throw quite a different light on the matter and I am much indebted to him for a note of explanation. In one of the Ramesseum papyri which he has prepared for publication, dealing with the coronation festival of Sesostri I, but apparently, as he writes, edited from a document of the First Dynasty concerning a similar ceremony, he finds that  denotes a priestly title, recalling that of , and refers to priests who have, above all, to do with the dead king; they carry his statue and depict symbolically the ladder on which he is to climb to heaven. He adds that the title may be interpreted as "he who *shns* the spirit of the dead king" and compares it with the function of Horus as *shn* of Osiris, so frequently mentioned in the Pyramid Texts. Now, if, following the indications given above, *shn* is interpreted in the sense of "protect" or "support," the solution is complete, the *shn-sh* is the functionary who "protects" the king's spirit, that is, provides for its safety by the execution of the proper rites.

A similar sign-group is , which sometimes takes the place of *pr-wsb* to designate the naos which holds the statue of the defunct; on the analogy of , it may be interpreted as "that which protects the god"—the "god" referring, as with kings, to the glorified dead, equated with Osiris (Montet, *op. cit.*, 310).

³ We may omit the Nubian examples, for they are of the same nature as the Egyptian, but lag behind them in time; see C. M. Firth, *Reports on the Archaeological Survey of Nubia*, 1908-9, 170, 185; *op. cit.*, 1909-10, 107, 109, 113, 115 and 118. All these are of the C-group, Sixth to Twelfth Dynasties; in the

figurine in the British Museum, no. 53879, illustrated in Pl. x, fig. 2, seemingly a mere servant, as in the tombs of the Middle Kingdom, still performs the mother's function; the upstretched arms hold a basket, the mother still brings food to the inhabitant of the grave, but now it is the produce of the earth and not from her breasts.

With regard to the broad hips, there is, in later times, the glint of a suggestion that they were connected with goddesses. In a Graeco-Roman papyrus in Cairo, treating of the Ritual of Embalmmment, it is ordered that the "Hathor bandage" should be laid over the face of the mummy with the assurance that "she shall make broad thy hips among the goddesses,"¹ from which we may justifiably infer that this was a feature proper to goddesses in general, for the various goddesses of Egypt and Mesopotamia were always liable to be confused with the mother-goddess, their prototype, as, for example, Isis with Hathor or Ishtar with Nin-khur-sag, and when Asiatic goddesses such as Ishtar and Anat, or Kēdesh, arrived in Egypt, they were often equated with Hathor; thus it would be only natural for them to share with the mother-goddess her physical peculiarities.

In the Middle Predynastic age the mother-goddess still protects the dead. She is now found painted on the red-on-buff jars, with thin waist and well-developed hips, still holding her arms upstretched over her head; the jars are of a purely funerary character and there can be little doubt that these paintings of women simply replace the earlier figures in the round and provide the same service for the defunct².

Besides female figurines, male ones are sometimes found in Early Predynastic graves; they wear the pudendal sheath, showing them to be of native race and not foreign captives³. One of them, now in the British Museum, no. 50687 (see Pl. vi, fig. 5), has his arms raised in the same pose as the mother-figures; with him may be compared the man depicted on the white-on-red jar referred to on p. 33, n. 3, who, however, wears no pudendal sheath, perhaps by reason of the rite in which he is seemingly engaged. The

earlier there are a few examples, see *Report*, 1909-10, 48, 51 and 65; these bear great resemblance to the Egyptian figurines, see especially the last, p. 65, and Pl. 11 f.

It is well to note that these figurines were all found in graves, some in those of young girls and some in those of adults, including males.

The clay figurines illustrated in *Prehistoric Egypt*, Pls. iii, 4 and 5, and iv, 8 and 9, show traces of upstretched arms; the remainder are of the usual mother-goddess type. The examples in the Ashmolean Museum are armless, but fall in with the types here discussed. An excellent specimen, now in the Bremen State Museum, like those here illustrated from the British Museum, is published by A. Scharff (*Grundzuge der ägyptischen Vorgeschichte*, Pl. 13). He rejects the somewhat current view that it represents a mourner, arguing that the dead man would much rather have a companion in the grave to bring him enjoyment, and he proposes to follow those who see in it a dancer, suggestive even of the "ghāwāzi" with their *danse du ventre*.

¹ See G. Maspero, *Mémoire sur quelques papyrus du Louvre*, Paris, 1875, 25, 18 and 104.

² Many have been published; representative examples are shown in Capart, *op. cit.*, figs. 83 and 84. Rare instances are known of women painted on these jars with their arms akimbo and otherwise posed. One of these, now in the Metropolitan Museum of Fine Art, New York, is illustrated by W. F. Edgerton in a paper on "Ancient Egyptian Ships and Shipping" in the *American Journal of Semitic Languages and Literature*, Chicago, Jan., 1923, 109-135, figs. 5-8; other figures of women on the same jar have their arms in the usual attitude. Another exception is the woman painted on a jar from the MacGregor collection, illustrated in the Burlington Fine Arts Club's *Cat. of Ancient Egyptian Art*, 1922, Pl. xxxiv, p. 7, no. 31; here, on one side, three women stand in a row, holding hands, and, on the other, is a man between two women, one of whom he holds by the hand. The arms akimbo are also seen in the stylized epipalaeolithic figurines from Spain previously mentioned.

³ See *Diospolis Parva*, Pl. v, B and U 96 (two), and *The Predynastic Cemetery at El Mahasna*, Pl. xi, 1, and p. 26 (an ivory male figurine from a grave of Sequence Date 34).



- 1, 2, 3. "Willendorf Venus."
4. Predynastic figure of baked clay (*Naqada and Ballas*, Pl. vi. 1)
5. Woman and child on a bed, in baked clay, painted B.M. 20,982. *Scale c. 1.*
6. Figurine in baked clay (*Diospolis Parva*, Pl. xxvi, N 6).

pose is evidently borrowed from the mother-figures and denotes protection, but the male figurines are quite exceptional; the father, with all his authority, could not oust from her position, gained countless centuries before, the mother, the first known source of life.

The figurines dealt with above display, in this pose, a characteristic peculiar to Egypt, but there remains to be considered a remarkable group of others which are very clearly of Mesopotamian type. The British Museum contains four ivory figurines of this class, nos. 3239-41 and 3244¹. Two have the arms across the breast, in the usual way, one has one arm, and the fourth both arms, hanging down; one of them is furnished with hair, or a wig, exactly resembling, as Mr. Sidney Smith kindly pointed out to me, that on a copper figurine from an early foundation-deposit at Tell Lo, now in the British Museum, no. 103372, dating from the time of Urnina, c. 2900 B.C. (See illustration mentioned in footnote 1.) Others of the same type were in the MacGregor collection²; some of them wear the same kind of hair or wig which, it should be noted, is also found in votive offerings to Hathor in the Eighteenth Dynasty³. (One of them differs from the usual type in holding her hands in the position well known in the Cnidian class of Greek statues of Aphrodite most familiar from the late "Venus dei Medici"; this pose is generally interpreted as directing the attention to "female charms," but really indicates the two essential functions of the mother-goddess from whom Aphrodite descended.) The workmanship indicates one origin for the various specimens of this group of ivory figurines; note, for example, the prominent ears. Their Mesopotamian connection is further attested by the dress worn by another figurine of the group in the British Museum, no. 32143, of a woman carrying a child (see *Journal*, XII, 240, n. 6). Their date seems to be in the later part of the Middle Predynastic period or a little later, but cannot be given with any exactitude as their provenance is unfortunately unknown.

An important fact about this group is that in it we see for the first time evidence of actual worship; several of the figures are fitted with pegs at their bases, showing them to be votive offerings for presentation in a temple, perhaps a frail shrine of wood and reeds such as that of Neith figured on an ivory plaque of King Aha⁴.

This worship of the mother-goddess continued, apparently, till the Protodynastic age, as witnessed by the figures found at Hierakonpolis similar to those just described, but artistically more developed⁵.

In the Berlin State Museum are some figurines of ivory, etc., of which a very interesting selection has been published by Schäfer and Andrae (*Die Kunst des Alten Orients*, 574 and Pl. 171); I would draw attention to nos. 2 (with 3), 5 and 8, the first two of ivory, the third of wood. The whole group is given as either predynastic or early dynastic, but I think that the specimens noted may safely be considered as of the former period, perhaps contemporary with, or a little later than, those in the British Museum—the obesity of no. 2 is remarkable, comparable with that of palaeolithic mother-figures.

¹ Sixth Egyptian Room, floor-case d, case-numbers 39-42 (*Guide*, 282). For an illustration of one, with wig and inlaid lapis eyes, see *The Guide to the Egyptian Collections*, fig. 10, p. 5. The whole group, including a female dwarf, is illustrated in Budge's *History of Egypt*, I, 52-53.

² Published by Naville in *Rec. trav.*, XXII, Pls. iv and v, also by Capart, *op. cit.*, fig. 117, with others in fig. 116.

³ *Deir el-Bahari, Eleventh Dynasty Temple*, III, Pls. xxiv, 2 and xxxii, 6. This fashion of head-dressing is common in the Mesopotamian figurines of the mother-goddess; it occurs also in those found by Petrie's expedition at Gerar, dating from the early Jewish kingdom and referred by him to Hathor.

⁴ *Royal Tombs*, II, Pl. x; Capart, *op. cit.*, fig. 174.

⁵ Capart, *op. cit.*, figs. 119-120.

A new feature in the examples noted is that the women carry children, as in the figurine in the British Museum noted above, no. 32143, but while she is dressed, they are nude. Now Nin-khur-sag, with other goddesses, including Ishtar who so largely supplanted her, is commonly associated, as is natural, with children, and thus these figurines take their place among those goddesses. Further, the child in Fig. 5 is taking the mother's breast, a gesture common in representations of Mesopotamian and other mother-goddesses; it is conventional with Ishtar, who holds a child on the left arm, giving it the breast, while the right one is raised in the act of blessing. Nin-tud, too, goddess of childbirth, a form of *Belit-ili* ("Sovran Lady of the gods"), carries a babe on her left arm, suckling it¹.

The Late Predynastic age introduces the mother-goddess in a new guise, identified with the cow. At Al-'Ubaid, at a very early period, under the First Dynasty of Ur, we find Nin-khur-sag identified with that animal, the source of natural and regular nourishment, a marvel so great to primitive peoples that they would have no difficulty in seeing in her the quality of godship, just as, for example, the Pacific Islanders saw it in Captain Cook and Central Americans in Cortes' horse; equation with the mother-goddess would follow not unnaturally, the kindly function of both being the same. The worship of the cow-goddess in Mesopotamia, at this remote period, must have been highly developed and of long standing, as is proved by the magnificent temple erected to her. In Egypt there are no traces of it in the first two Predynastic ages; in the Early period clay figurines of domesticated cattle have been found in graves², and drawings of them were made on white-on-red jars, such as no. 49025 in the British Museum (Sixth Egyptian room), but their horns are different and they may possibly represent a wild variety, the more so since this class of pottery abounds in drawings of wild animals likely to appeal to a hunting people such as the makers of white-on-red pottery seem largely to have been³.

The figures of cattle, wild or domestic, were doubtless substitutes for the living creature, intended as food for the dead, and not objects of veneration; but the advent of veneration in the next age, the Late Predynastic, is proved by the cow-head amulets in amethyst, ivory, etc., found in graves from Sequence Date 46 to Protodynastic times⁴. Amulets in general are not found in the earliest age; these cow-heads are among the first, as an analysis of the specimens published in Petrie's *Amulets and Prehistoric Egypt* will show. They are furnished with means of suspension, indicating that they were worn by the defunct when alive; thus the protection that they afforded him in life was continued after death. They have often been interpreted as bulls' heads—very naturally, according to our modern way of thought in which the bull is an outstanding symbol of vigour while to the cow is mainly attached the idea of mildness; but in old thought the cow, as food-producer, was paramount, as we have seen in Ancient Mesopotamia, and for a time she became in Egypt, as there, the supreme goddess, known in historical times as Hathor;

¹ See R. C. Thompson, *The Devils and Evil Spirits of Babylonia*, II, 147-9.

² The group of four now in the British Museum (no. 35506) was found at El-'Amrah, in grave a. 23, an ox in grave b. 184, a bull, cow and calf in grave 212, all of them attributed to a Sequence Date before 41. (See *El-Amrah and Abydos*, 41, and Pl. ix, nos. 2, 3, 6, 9 and 10, and *Prehistoric Egypt*, 11. Many others are known.)

³ See, for examples, *Prehistoric Egypt*, Pls. xvi-xviii, and *The Predynastic Cemetery at El-Mahasna*, Pls. xiv and xxxii.

⁴ There are several in the British Museum and University College collections; see *Prehistoric Egypt*, Pl. ix, 1-6. The high value put on these objects is shown by the rich material in which they were carved. Petrie (*op. cit.*, 11) aptly compares the *bucrania* found on shrines and over doorways of very early times.

these amulets are her symbol, part for whole, and her surrogate¹. Further, we have the evidence of another palette, with its Hathor head and stars, dating certainly from the Late Predynastic age, if not from the Middle as some think².

The coming of the Hathor form of the mother-goddess seems to coincide with the rising to power of the Falcon-folk who eventually subdued and unified all Egypt, and it is not unreasonable to presume from her name that she was pre-eminently their patron-deity, *ht*, like *pr* (e.g. *pr-ḥ* = Pharaoh) or *ist* (e.g. *ist-nhm* = *ht-nhm* = Denderah), conveying the idea of "seat" or "centre."

Though the plain mother-goddess survived the arrival of Hathor, as we shall presently see, and her figurines are even found in Protodynastic times³, Hathor was henceforth to be the foremost deity. She is the first to be formulated on a definite historical monument, the great palette of Narmer; in the Fourth Dynasty her pre-eminence is proved by the sculptured groups from the ruined temple of the Third Pyramid of Gizeh, displaying Mycerinus as lord of the several nomes; in each group the patron-goddess of the nome is on his left, but on his right is Hathor, patron-goddess of all⁴. That in historical times she assumed many and various rôles is to be explained by the high place that she always held in popular imagination; accordingly, when the official Sun-cult, fused with the Osirian, overlaid all former ones, she had to be absorbed in its system and reconciled with its theology—thus, for example, she became the "Eye of Rê"⁵, or the Sky-goddess, often represented as a cow. In popular stories, with their variations from the official cult, she becomes an errant genius, in fact a fairy, multiplied, just as happened to the Buddha, by the mystic number of seven; as "the Seven Hathors" she attends at child-births and gives oracles for the newly-born⁶.

¹ For the probable coming of the cow-goddess from Mesopotamia into Egypt, first adumbrated by M. Alfred Boissier, see my article in *Journal*, XIII, 245. As regards dates, the cow-head amulets had already reached Egypt before the First Dynasty of Ur, but, as pointed out above, the cult of this goddess must have originated long before then (see also Contenau, *op. cit.*, 124-5, and, especially, C. J. Gadd in *Al 'Ubaid*, 141 ff.).

² Petrie and Wainwright, *The Labyrinth, Gerzeh and Mazghounah*, Pl. vi, 7, and Scharff, *op. cit.*, Pl. v, h.

³ *Hierakonpolis*, I, Pls. xviii, 3, and xix.

⁴ See Maspero, *Egyptian Art* (transl.), 40 ff.

In the group now in the Boston Museum of Fine Arts (Schäfer u. Andrae, *op. cit.*, 221) Hathor, seated, is the central figure; the king stands on her left, she has one arm round his waist and the other, across her breast, touching his right arm; thus she holds him, as an affectionate mother, in her protection. This attitude is very common in statues of man and wife, as in the group of Mycerinus and his consort (Maspero, *op. cit.*, 57); it may be held to signify wifely care and support and not merely affection, as commonly—and naturally—interpreted: such a view is wholly consonant with the importance of the wife in Ancient Egypt; she was the transmitter of racial purity, kings were not completely legitimate unless their consorts were of royal blood and the official attitude of the ancient Egyptian towards his wife was one of great consideration.

Hathor's attitude in the above group is unusually pronounced; generally the goddess touches the king's shoulder, sometimes she holds an arm round his shoulders, the hand resting on one of them, as in the wall-relief of Ne-user-Rê (Borchardt, *Das Grabdenkmal des Königs Ne-user-Rê*, Pl. 16). In one of the groups of Mycerinus the nome-goddess has her arms round his body, in another Hathor holds his hand.

⁵ Yet in the Pyramid Texts, Utt. 405, Pharaoh seems to be the eye of Rê "which shines in the face of Hathor." Hathor, like Min, being neither an Osirian nor a solar deity, has little place, and that indefinite, in these texts, but she found an indirect entry, as a cow, in the following passages. In Utt. 555 the king is recorded to have been suckled by the "cow who was mindful of Horus," and in Utt. 511, on the king's ascending to heaven, it is written "the cow that traverses the marsh makes a fine road for the King, she leads him to the great place made by the gods."

⁶ *Tale of the Two Brothers* and *The Enchanted Prince*.

In the Middle Kingdom the mother-goddess continues to serve as a funerary charm in a definitely Hathoric guise. In the tombs of that period nude female figures are found, generally equipped with the wig of Hathor; an example, in blue glazed faience picked out with purple-black, is illustrated in Pl. ix, fig. 4, length $4\frac{3}{8}$ in.; it was obtained from a Cairo dealer and was in the same lot of grave-goods as the faience desert-rats which passed into the collection of the late Lord Carnarvon¹. It is modelled without feet, as is often the case in this period; the wig is black and there are black spots ranged round the breasts and the junction of the trunk with the thighs, the colour being now much worn away. A decoration of some importance is a small falcon painted in black on the chest, just below the throat; it is alone, without containing frame or necklace, and so can hardly represent a jewel and may possibly be taken to indicate the connection of the figurine with Hathor, the goddess of the Falcon people—the wig is, as usual, that proper to Hathor.

These figurines are commonly interpreted as “companion” or “concubine” figures, made to provide the defunct with an amiable consort in the Otherworld; but this explanation is very open to doubt, for no trace of such figures has been found in the tombs of the Fifth or Sixth Dynasties and, though concubines existed in Ancient Egypt, the status of the wife and the solemn place which she holds in tomb-scenes were such that the introduction of a concubine seems most unlikely. On the other hand, other objects of this period afford clear evidence that veneration for the mother-goddess continued, and it is difficult not to see in this class of figurines the representation, in a less emphatic form than the earlier ones, of the protecting mother-figure connected with Hathor.

Rough clay figurines of nude women have also come down to us from this period, one of them, seated and holding two children, is in the British Museum and is illustrated in Pl. vii, fig. 1²; it is doubtless a fertility charm, perhaps placed in a tomb for protective purposes and should be compared with the figures illustrated by Schäfer and Andrae referred to above.

Besides mother-figures and fertility charms, other models of nude women were deposited in tombs of the Middle Kingdom. An example, of wood, in the British Museum, no. 22541 (height $11\frac{1}{8}$ in.), is illustrated in Pl. ix, fig. 5; slim and willowy, they represent young handmaids such as wait on guests, attentive and most gracious, in the banquet scenes of wall-paintings of the Eighteenth Dynasty.

Figurines of women, of all classes, often receive the convenient and comprehensive title of “dolls,” which they might be if found consistently in girls’ graves and only there, but the facts are all to the contrary, as is sufficiently proved by the Nubian examples referred to on p. 35, n. 3. Further proof that they had a magico-religious use is provided by the following facts:

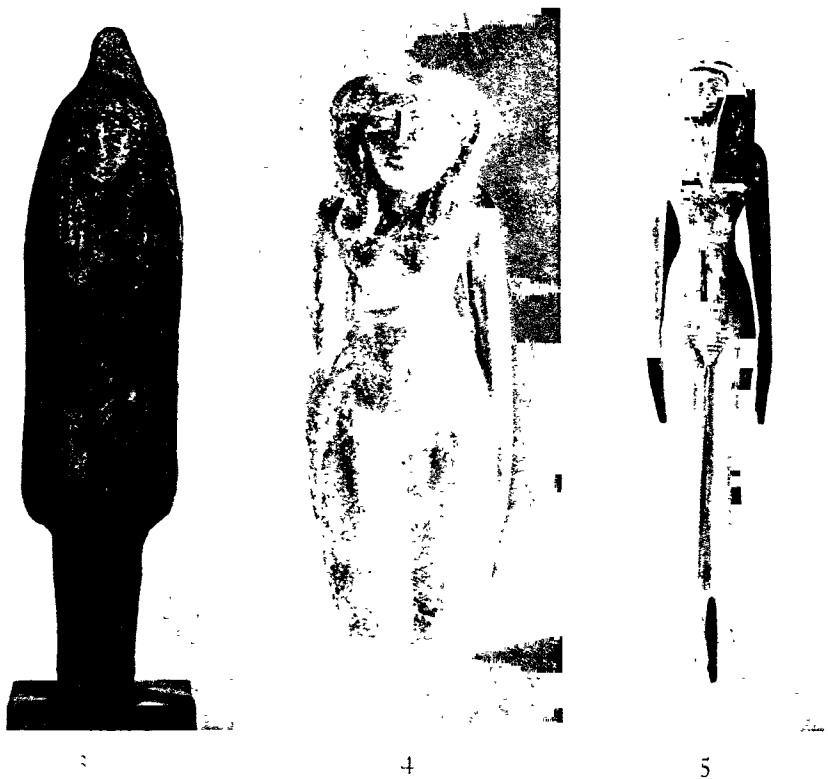
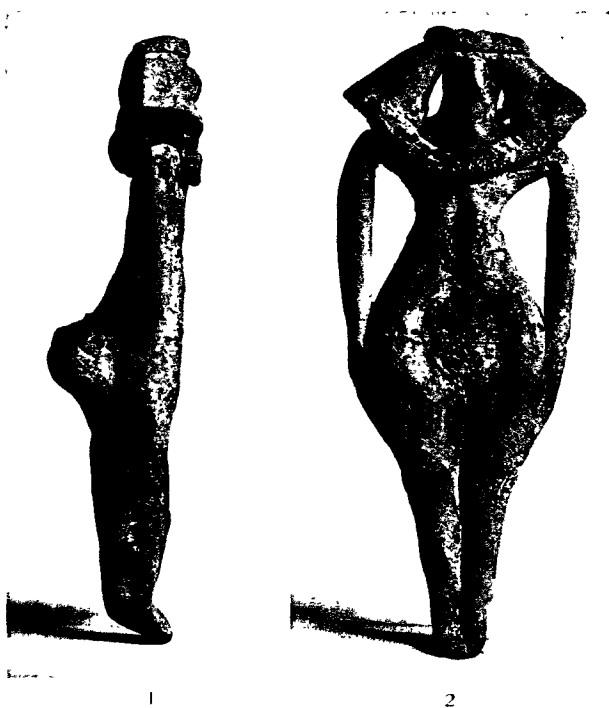
(1) The connection of such figurines as that illustrated in Pl. ix, figs. 1–2, with Hathor shrines at Dêr el-Bahrî and in Sinai and Nubia³; (2) the presence of a clay figurine of

¹ See the Burlington Fine Arts Club’s *op. cit.*, 92, no. 47, and Pl. xix. One of the group is in the British Museum, no. 37097, Fifth Egyptian Room, wall-case 221, middle shelf.

² No. 58066; sitting height $3\frac{3}{4}$ in., horizontal length $2\frac{1}{4}$ in.

A Greek terra-cotta figurine of a seated woman holding two children, of similar formlessness, was found at Paestum and is illustrated in *Die antiken Terrakotten, Die Typen*, Teil I, 147, fig. 6.

³ See the writer’s article on “Phallic offerings to Hathor” in *Man*, xxvi (May, 1926), 81–82, with its references to Griffith, “Oxford Excavations in Nubia,” *Liverpool Annals*, vii, 87; Naville, *The XIth Dynasty Temple of Deir el-Bahari*, III, Pls. xxiv, 2, and xxxii, 8 and 9; Petrie, *Researches in Sinai*, fig. 151, no. 14.



1. 2. Figurine in baked clay. *Scale 1/4.*

3. Figurine in baked clay, B.M. 21,953. *Scale c. 1/4.*

4. Figurine in glazed frit. *Scale 1/2.*

5. Figurine in wood, B.M. 22,541. *Scale 1/10.*

a nude woman, wigged, in the foundation-deposit of a temple built at Koptos by Tuthmosis III¹; (3) the presence of a limestone figurine of a nude woman on a bed in a group of *shabtiu* at Naukratis²; (4) the presence of a nude figure of a woman modelled in relief on a clay offering-stand of the Twelfth Dynasty, found in a tomb at Beni Hasan and now in the Fitzwilliam Museum at Cambridge³; accompanying it are other offering-stands on which are modelled the usual figures of serving-women carrying on their heads provisions for the defunct; all these are undoubtedly surrogates, in poor tombs, of the carved figurines placed in richer ones. Dolls, of course, are frequent⁴ and are difficult sometimes to distinguish from figurines of magico-religious import, yet the distinction should be made when possible—the comfortable label of “doll” is far too common.

Turning now to the New Empire, we find the same two classes of figurines as in the preceding age, mother-figures and fertility charms, but not the handmaid—ideas have been modified and *shabtiu* replace the older serving-figures. Mother-figures are generally alone, but sometimes with a child and sometimes on a bed, with or without a child. The last type is illustrated in Pl. viii, fig. 5, from an example in the British Museum⁵. The lady often wears personal decorations, a fine wig and jewels; the example in the British Museum, no. 21953 (length 7 $\frac{3}{8}$ in.), illustrated in Pl. ix, fig. 3, is one of many with the cone of perfume on their heads, as at a feast; this type continues to the Saitic and succeeding periods⁶. The bed is a novelty and seems to lend colour to the view that these are in fact “companion” figures, yet the nudity points to the old type; the bed is perhaps added as a feature of seamliness in a comfort-loving community. The child has been accounted for; it is unusual before this period and may owe its diffusion to Western Asiatic influences, then so common. As to the adornments, we have seen that from the earliest times the mother-goddess was decorated with women’s gear; if she now wears festal wigs and cones of perfume, she is but following fashion.

The fertility charms still retain their oldest characteristics. Many have survived⁷, of which a good specimen, from a private collection, is illustrated in Pl. ix, figs. 1–2 (length 5 $\frac{1}{2}$ in.). It shows a gluteal prominence amounting almost to steatopygy; the hips are

¹ *Koptos*, Pl. xv, no. 74.

² *Man*, xxvi, 81–2.

³ J. Garstang, *The burial customs of Ancient Egypt*, Pl. xi, figs. 205 and 211. Examples are also to be seen in the Ashmolean Museum, two cylindrical vases with nude female figures in high relief and a third (E. 2529), very rough, showing a face and only one arm, which points, characteristically, to the pubic area.

⁴ See examples in the British Museum, Fourth Egyptian Room, floor-case D, nos. 22632, 22612–3, case nos. 20–22. Many have holes pierced round the edge of a projection modelled round the top of their heads, to which were fastened locks of wool or hair, now perished, or strings of beads, to form a wig. Many of these even may have served as charms, for some of the clay figurines found in the ruins of the Hathor temple of Dêr el-Bahri were furnished with head-dresses of this description; see H. R. Hall in *Deir el-Bahari, XIth Dyn. Temple*, III, 16, and xxxii, 8 and 9.

⁵ No. 20982, in the Fourth Egyptian Room, floor-case D; length 5 $\frac{1}{2}$ in., breadth 2 $\frac{1}{2}$ in. See also Petrie, *Ehnasya*, Pl. xl, no. 20. Their date is fixed by examples published in *Riqqeh*, Pl. xxii, 6 and *Gurob*, Pls. xiii, 6, xxv, 20, and xlvii, 13 (for descriptions see chap. viii), all of the time of Tuthmosis III.

⁶ Two examples of these figurines are illustrated in *Man*, *ibid.* One of them, in limestone, of a nude woman lying on a bed, probably from Naukratis and now in the Royal Ontario Museum of Archaeology, formed part of a small set of *shabtiu*.

⁷ For published examples a few references are: *Diospolis Parva*, 53, and Pl. xxvi; *Deir el-Bahari, XIth Dyn. Temple*, III, Pls. xxiv (2) and xxxi (3) and (9); *El Amrah and Abydos*, Pl. xlviii, D. 29; *Abydos Cemeteries*, II, 63 and Pl. xiv, 1–3. For Nubia see Griffith, “Oxford excavations in Nubia,” in *Liverpool Annals of Archaeology*, viii, 87. The unpublished examples are legion.

broad, as in most specimens, the breadth is exaggerated almost to grotesqueness in the example shown in Pl. viii, fig. 6 (taken from *Diospolis Parva*, Pl. xxvi, N 6), much like the "Willendorf Venus" and almost rivalling the extraordinary obesity of neolithic figurines from Hagiar Kim in Malta¹. It can hardly be doubted that these physical features are inherited from the antique mother-figure, of which these figurines are direct descendants. Specimens have been found at Faras (Nubia) and Dêr el-Bahrî, in shrines dedicated to Hathor; they were probably made and sold by temple-servants, to procure childbirth for devotees, and they indicate that Hathor was then revered by the populace as promoter of fertility². At this time the fertility cult very likely enjoyed a reinforcement from Western Asiatic influences introduced with the Hyksos invaders; they brought with them their goddesses Anat and Ishtar, who had long before become identified in their own country with the mother-goddess and who remained as deities in Egypt after the expulsion of the Hyksos, Ishtar being generally represented in her form as War-goddess; it is hardly to be supposed that the Egyptians would thus readily have accepted these foreign deities from a detested foe if they had not accorded with some religious principle implanted in them of old. In a previous article I have remarked on the nude female figures engraved on scarabs of the Hyksos period and their survival on bronze mirror-handles of the following age³; this type of scarab-engraving comes in abruptly and seems to have died out with the departure of the Hyksos; the nude figures are counterparts of the mother-goddess figures engraved as charms on Mesopotamian and Syro-Hittite seals; that they were, occasionally at least, identified with Hathor is shown to be probable by a scarab illustrated in *Hyksos and Israelite Cities*, Pl. ix, no. 137, where the roughly engraved figure is endowed with Hathor-ears and what seems to be the feather crown sometimes worn by royal ladies, an unusual and probably foreign mixture. In the mirror-handles the indistinguishable object held in the woman's hands probably represents a dove, as may be seen in a wooden figurine of a nude girl in the Bologna Museum who holds a bird in her hands⁴—another link with the Mesopotamian goddess. (This figurine also wears the feather head-dress above mentioned.)

The fertility figure is found in graves as well as temples, which proves that the mother-goddess continued her ancient function of protecting the dead.

In the Twenty-second Dynasty we have two clay figurines of nude women found at Badârî, 1924-5, and not yet published. Under the Greeks the same figure is found, sometimes with a child by her side⁵. The type was very popular through the Roman period, with probably a good deal of direct Western Asiatic influence behind it; a noticeable form is the well-modelled nude figurine of pottery, plastered and painted,

¹ See T. Zammit and C. Singer, *op. cit.*, Pls. v-xvii. These neolithic figurines, whether male or female, carry on most strikingly the palaeolithic convention of obesity which seems in this reign to have become attached to all magico-religious representations of the human form; the female deity represented is undoubtedly the goddess of fertility. Remarkably similar are a limestone figurine from Iflatun Bunar, on the borders of Lycia and Pamphylia, and one from Crete, illustrated by Sir Arthur Evans, *The Palace of Minos*, fig. 13, among the many brought together by him for comparison (pp. 45-54). See also the figurine from Kom Zimran illustrated in *Naukratis*, II, Pl. xv, 7. It is quite clear that no racial classification can possibly be founded on these excessively obese representations of the female form, occurring as they do among races of ordinary bodily proportions—this fact alone should prevent any inference that obese prehistoric figurines denote a specially obese race.

² See *Man*, *ibid.*

³ *Journal*, VIII, 303-4.

⁴ H. Fechheimer, *Kleinplastik der Aegypter*, Pl. 65.

⁵ For examples see *Memphis* I, Pl. xxxv (7-13).

with large head-dress and plentiful jewelry. Very rough and abridged versions were deposited in graves as protection-charms¹.

To sum up, the conclusion to be deduced from this survey is that the cult of the mother-figure was in Egypt an inheritance from the late palaeolithic age and formed an element of the Libyan branch of Capsian culture which embraced Egypt. A Mesopotamian form of worship of the mother-goddess was introduced at some time in the Middle Predynastic period and continued as a recognized practice till the end of the Protodynastic age: during this period it became fused with the worship of the cow-goddess, also of Mesopotamian origin. After the Protodynastic age the cult of Osiris became general², followed, a little later, by its rival, the Heliopolitan sun-cult, essentially a royal religion, the two eventually fusing together to form the official religion known in history. With these developments the worship of the antique mother-goddess—but not that of her derivative, Hathor—lost its official status but survived as a popular practice till the latest pagan days.

Some attention is due to the presentment of the goddess as a mother suckling her babe, of which we have already noticed a predynastic example on p. 38. Such figures seem to be rare in that age and the immediately succeeding ones; they may have been made in the Old Kingdom, to judge from the following case. A limestone group with two children being suckled was formerly in the late Lord Carnarvon's collection³; the treatment is free and the pose unlike the conventional one of the well-known later Isis-Horus group. It has been referred to as belonging to a set of funerary figurines bought by Professor Breasted and now in the Haskell Oriental Museum, Chicago; this set, once considered to date from the Old Kingdom, is now attributed to the archaizing Saitic period⁴; it was possibly copied from an Old Kingdom original and so may indicate that such groups were sometimes placed in tombs of that period.

By the time of the Middle Kingdom this group had become definitely identified with Isis and Horus, as is proved by an example, of copper, now in the Berlin State Museum, which bears the name of Isis engraved on the base⁵; it is a work of great beauty, in treatment midway between the freedom of the early examples and the strict conventionality of the Saitic type. It represents a further development and a narrowing of the earlier form of the cult; it is now a charm serving to procure for its owner privileges formerly enjoyed by royalty alone, namely the divine nourishment proper to a king, for the living king was Horus. In the New Empire and succeeding ages the examples of goddesses suckling kings are too numerous to require mention; this function, once peculiar to Hathor⁶, was later shared by all the chief goddesses of the country⁷ and particularly

¹ *Saqqara Mastabas*, I, and *Gurob*, Pl. xviii.

² First traces of it are in the Osirian dress of the kings on the great mace-head of Narmer and the ebony tablet of Den, but it is fully shown first in the Third Dynasty, in the objects depicted on the walls of the tomb of Hesi-Rêf (J. E. Quibell, *Excavations at Saqqara*, 1911-12, Pl. xvii, nos. 25 and 28, and Pls. xiv and xv), and the monuments of King Zoser (base of statue and decoration over the doorway of the temple—see *The Illustrated London News*, Jan. 7, 1928, p. 9).

³ See The Burlington Fine Art Club's *op. cit.*, 278.

⁴ See *The Chicago University Record*, VII, 10, and XIII, no. 2, plate facing p. 116.

⁵ Schäfer u. Andrae, *op. cit.*, 278.

⁶ Among the votive offerings to Hathor in the temple of Dêr el-Bahrî were models of breasts: see H. R. Hall in *The XIth Dynasty Temple of Deir el-Bahari*, III, 16.

⁷ Royal persons, when paying their duties to particular deities, especially in their own temples, commonly addressed them as their father or mother, so that to be suckled by goddesses in general was to them a natural act. It occurs early in literature: for example, several passages in the Pyramid Texts assure the Osirified king that he is suckled by Nephthys (Utt. 268, 365, 553 and 555).

by Isis, who in process of time gained the chief place among goddesses in general veneration, eventually becoming, in fact, for foreigners, with Osiris the very embodiment of Egyptian religion.

In the Saitic and later periods the Isis-Horus group is among the objects that have come down to us in the greatest numbers; it is in a stiff and conventional form which first appears, however, in a red pottery phial of the Eighteenth Dynasty, to be described later. A particularly interesting example of the Roman age, from a private collection, is illustrated in Pl. x, fig. 1 (height 3 in.); at first sight one might declare it a Christian work of the late Renaissance, but a nicer examination shows true Egyptian characteristics of the Roman time. The substance is the dark coloured soft terra-cotta usual in Romano-Egyptian figurines; the fringed shawl and knot are proper to the Roman Isis as well as the long curls down the neck, one of her titles being the "goodly tressed" (εὐπλόκαμος)¹; the finger of Horus, in his mouth, is an unmistakable feature; Isis has lost her crown, as the empty socket shows—perhaps a lotus. Mr. E. J. Forsdyke, from stylistic considerations, would place it in the 1st century B.C.

It remains to give a brief account of another form with which the human mind has clothed its conception of the mother-goddess, the jar, which is fairly common in Egypt.

A very early example found at Abydos is illustrated in *Cemeteries of Abydos*, II, Pl. iv, no. 5. It is of the red burnished pottery which ranges through a great part of the predynastic age, beginning with the earliest, but, having been found in the loose sand, it cannot be precisely dated. The figure is armless, with small breasts and very wide hips; two similar ones are in the Ashmolean Museum², they all bear strong resemblance to the terra-cotta Badarian figure referred to on p. 32. Dr. Naville has published others³ but of them only one, of the incised black ware which began after the Sequence Date 40, can be dated to the predynastic period (Pl. i, *op. cit.*). It is of great interest for the similarity of the modelling to that of earlier Sumerian sculptures; the arms are posed under the breast as in Mesopotamian figurines of the mother-goddess, and Dr. Naville concluded that it was intended to hold some precious liquid equated with the holy milk of a goddess—we should now hardly hesitate to identify her with the mother-goddess.

In the University College Museum are some rough jars of the First Intermediate period, with arms moulded on them holding the breasts. One of them is illustrated in Pl. x, fig. 4, from a photograph for which I am indebted to Sir Flinders Petrie; it has four rows of necklaces modelled in relief, carrying on the old tradition of showing jewelry on the mother-figure; height 9½ in. The breasts form spouts as in the example published by Naville, and the same feature occurs in another specimen in this museum. The spouts are halfway down the jar and would be impractical for any ordinary use; the vessels must have been of a ritual character, used for some liquid equated with a goddess's milk, doubtless Hathor's, to judge from a vase-group of the Eighteenth Dynasty, described below; possibly they were symbolical, no liquid being used. Wainwright, in the *Ann. Serv.*, xxvi, 162-3, publishes two rough jars with arms moulded on them holding the breasts, also of this period; Petrie has compared them (*Ancient Egypt*, 1928, I, 26) with the canopic jar of *Wsh-k* in the College collection, but the latter is of a totally different nature and the arms hold an *ankh* and a *was* sceptre (*Ancient Egypt*, 1924, II, 36). An

¹ See Daremberg et Saglio, *Dictionnaire des antiquités grecques et romaines*, III, 579.

² See M. A. Murray in *Historical Studies*, 42, and Pl. xxii, 1; also Capart, *op. cit.*, fig. 91, and *Diospolis Parva*, Pls. v and vi.

³ *Rev. trav.* (1899), 212, and (1900), 65-66. Some of the objects are reproduced by Capart, *op. cit.*, 169, fig. 124.



1



2



3



4

1. Terra cotta figure of Isis and Horus. Full size.
2. Female bust in baked clay. B.M. 53,879. *Scale c. 1/2.*
3. Fragments of a pottery vase. Ashmolean Museum. About full size.
4. Pottery jar. University College, London. *Scale c. 1/2.*

Eleventh Dynasty example from Denderah is to be seen in the Ashmolean Museum (E. 1966-1898) consisting of the mouth of a jar on which is modelled a human face and, just below it, two breasts upheld by arms and bored with very small holes as spouts; it is illustrated by Petrie in *Denderah*, Pl. xxi, but the details are there obscure¹.

In the Eighteenth Dynasty this type of jar was connected with Hathor, as we see from the strange group-vase found by Petrie in the foundation-deposit of the Min temple built at Koptos by Tuthmosis III and now in the Ashmolean Museum². The group consists of five vessels joined together. "The two front jars have arms with hands holding breasts and apparently two feet turned up in front. A cow has lain across these feet in each jar. Between the front jars is a Hathor Cow, with disk and uraeus between the horns; another.....stands further back." Further he describes "another group-vase.....formed of two vases with faces in relief on the necks and a cow between the necks" (this "cow" is a Hathor-head). In these we have the mother-goddess Hathor and a jar most strikingly combined and it is important to note that these objects were

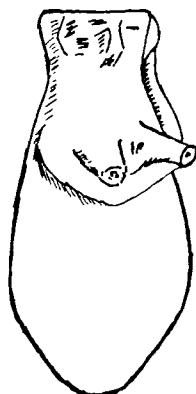


Fig. 5.

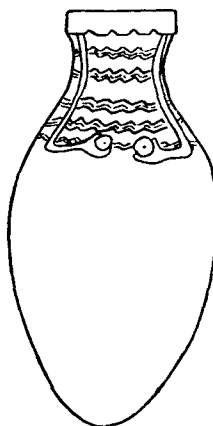


Fig. 6.

found as a foundation-deposit in a temple dedicated not to Hathor but to Min, showing them to be common objects of veneration. One would expect to find them, if anywhere, in a Hathor temple, and in fact similar vase-groups have been found in that of Dêr el-Bahrî, of the same period, as votive offerings³.

In the later part of the Eighteenth Dynasty a very roughly modelled jar, of the type belonging to the First Intermediate period, described above, was found at Abydos⁴, the

¹ Vessels with breasts as spouts are found in the regions of Minoan culture; for example, one found at Mochlos, of the Early Minoan age, corresponding roughly with the end of the Old Kingdom (Dussaud, *op. cit.*, 369, and fig. 274). The jars described by Wainwright have a parallel in those found in the Second City of Hissarlik, which date from about the same period. Much earlier examples, dated at about 3000 B.C., were found at Kish (E. Mackay, *Report on the excavation of the "A" Cemetery at Kish*, pp. 21-23, Pls. ii, ix and x). Many jars were there discovered having high shoulders on which was placed a strange form of handle, the upper end not being joined up with the rim but standing separate, quite close to it; the handles, of tubular construction, evidently represented, as the author says, original spouts; they are shaped with human faces and breasts and some of them have the pubic triangle either on the handle itself or on the body of the jar just below the handle. (Specimens are in the Ashmolean Museum, nos. 1925, 30 and 217.)

² *Koptos*, 14, and Pl. xiv, 7 and 29.

³ H. R. Hall in *Deir el Bahari, Xlth Dyn. Temple*, 15, and Pl. xxxvii.

⁴ *The Cemeteries of Abydos*, II, Pl. xxxiv.

breasts forming prominent spouts (see Fig. 5). Two jars of typical red pottery of the early Eighteenth Dynasty were found at K̄au by Mr. Guy Brunton, with arms and breasts moulded on them; he has kindly allowed me to publish an illustration of one (Fig. 6). At Byblos, so closely connected with Egypt, a similar jar was found, of about the same date, with long pendent breasts and arms folded across the body below them (British Museum, no. 48477).

The figure-jars in fine red pottery described by Dr. Naville are undoubtedly of the Eighteenth Dynasty; I have already mentioned the steatopygous bow-legged example illustrated in *El Amrah and Abydos* (p. 30), so like the Queen of Punt; another specimen from the same place is illustrated in *Abydos*, III, Pl. xvi, no. 5—a gracious figure¹. Others of the same kind are exhibited in the British Museum, Sixth Egyptian Room, wall-case 254, and are illustrated in the *Guide to the 4th, 5th and 6th Egyptian Rooms*, 258, and Pl. vii. A further specimen, now in the Ashmolean Museum, is in the shape of a fat negress; it is illustrated by Garstang, *El Arabah*, Pl. xix. These jars have usually been attributed to Syrian influence, as they are made of a fine red burnished pottery which forms the material of several types of vase and flask which are of foreign shape. But this kind of pottery had long been made in Egypt, the fashioning is true Egyptian and the models, generally quite secular and domestic, playing musical instruments and so on, are rooted in the old Egyptian tradition.

One little jar in the Ashmolean Museum (no. 1921, 1290) takes the familiar shape of a woman suckling a babe. A fragment of it has been published in *Sedment*, II, Pl. xlvi, which seemed to demand a child for complement; on my enquiring into this point, Mr. Leeds was good enough to search out the fragments that accompanied it; he found several fitting in to the fragment published and showing that the whole consisted of a woman suckling her child, who sat, with his legs across her lap, in the conventional position so well known in the later groups of Isis and Horus, the child wearing the usual long lock of hair. The fragments are illustrated in Pl. x, fig. 3 from a photograph for which I am indebted to Mr. Leeds; there can be little doubt that the group was one of Isis and Horus.

Of the Greek period an alabaster jar modelled as a woman-figure, with hands to breasts, was found at Memphis, near the temple of Merenptah²; with it we close the history of the mother-jar, which, like the mother-figure, is seen to range throughout the length of ancient Egyptian History³.

A descendant of the fertility goddess is probably to be discerned in the humorous little models, both figurines and phials, in terra-cotta or glazed frit, so common in Greek and Roman times, shaped as a very fat and cheerful woman squatting with haunches

¹ In the same plate (fig. 3) is illustrated a small bottle in the regular shape of a mother-goddess, one hand holding up a breast. In *The Cemeteries of Abydos*, III, Pl. xii, 7, the figurine of a nude woman is shown with her arms outstretched—a solitary example, perhaps, with no. 5, of foreign origin (v. p. 33, *op. cit.*).

² *The Palace of Apries*, 15, and Pl. xxii, 13.

³ Those two popular genii, Taurt and Bes, who preside over childbirth, are also brought into relation with pots in the late Egyptian times. Borchardt (*Das Grabdenkmal des Königs Sahure*, I, fig. 177) publishes a glazed frit jar of late date, modelled as Taurt, one hand holding up a breast which serves as a spout; the vessel, he suggests, held milk. In the British Museum and the Museum of the University College, London, are many rough jars modelled in the form of Bes, often very summarily; they are all of late date. Examples have been found at Beisan, in Palestine, see *The Illustrated London News*, Nov. 26th, 1927, and Dec. 28th, 1928 (a dwarf-like figure of the time of Amenophis III.).

wide apart, her lower parts bare and conspicuous and, in fact, emphasized by the pointing hands. This is none other than Baubo, that strange figure in the Eleusinian mysteries which is held by Lenormant¹ and others to have been introduced from Egypt after the Peloponnesian war, together with the *gephyrismoi*, obscene competitions in word and gesture, with a fillet as prize, that enlivened the return to Athens of the devotees. They are said to have been derived from similar practices in Egypt, as reported by Herodotus (II, 60), connected with the great festival at Bubastis. A possible explanation is that the city-goddess (in this case Bast) was, like Hathor or Isis, considered a generator of fertility and that the obscenities recorded were a vulgar degeneration of rites connected with this aspect of her. The Baubo figure would thus be a form of fertility charm and not a mere product of Rabelaisian humour².


¹ Daremberg et Saglio, *op. cit.*, I, 638, and fig. 808, and II, part I, 573.

² Baubo must have firmly rooted herself in the popular mind, for she survived into Christian times and is found in ecclesiastical decorations of the Middle Ages and later; see G. C. Witkowski, *L'Art profane de l'Église - Étranger*, figs. 40 and 107; he also illustrates examples of that strange figure, *Sheilú na gíg*, from Irish churches (figs. 357-9): for an English example see Murray and Passmore in *Man*, XXIII, 140, where the figures are considered, doubtless rightly, as the remains of a pagan fertility cult—probably for the benefit of newly-wedded brides. See also Hastings' *Enc. of Religion and Ethics*, art. "Phallism," by E. S. Hartland, IX, 817-8, and Witkowski, *op. cit.*, fig. 303, for a similar figure from a painting on a wall in the Vatican. In certain churches "Earth" is represented as a woman suckling animals and snakes, and the "Sea" as suckling fishes (Witkowski, *op. cit.*, figs. 14, 15 and 410)—weird and distant descendants of the mother-goddess, recalling the Egyptian representations of Neith suckling a crocodile (Lanzone, *Diz. mit.*, Pl. 175), but of course this is only symbolic of a tradition of tribal descent, the Crocodile tribe of the Fayyûm being held as descendants of the Neith people of the Delta (cp. Pyr. Texts, Utt. 510—"as Sebek is the son of Neith").

THE TRANSCRIPTION OF NEW KINGDOM HIERATIC

By ALAN H. GARDINER

In the year 1911 a prospectus issued by the firm of J. C. Hinrichs of Leipzig announced the inauguration of a new and not altogether unimportant Egyptological publication. It was entitled *Egyptian Hieratic Texts*, and the editor who embarked upon it with high hopes was myself. Alas for the uncertainty of human schemes; other preoccupations and duties intervened, and the publication in question ceased with Series I, Part 1. Now after eighteen years I have thoughts of continuing this work in somewhat different form, though my plans are not sufficiently advanced for any definite undertaking to be given on the subject. At all events I have one new and highly interesting Late Egyptian text to publish in the near future, and for this purpose it seems appropriate to review the methods of transcription which, in common with other scholars, I have hitherto adopted. Thanks to the labours of the late Professor G. Möller, to name only the foremost authority, we now know much more about the history of the hieratic script than was known twenty-five years ago. Nevertheless there is a lack of agreement as to the principles that ought to govern our transcriptions from hieratic into hieroglyphic. The attempt made by Pleyte¹ in 1865 to introduce a standard fount of hieratic type did not meet with the approval of his colleagues, and that possibility has been discarded once and for all. It having been decided, then, that hieratic texts, unless reproduced in exact facsimile, are to be presented in the guise of hieroglyphic transcriptions, the question next arises, What kind of hieroglyphic equivalents are to be employed? Ought we, for instance, to take as our guide the hieroglyphic inscriptions contemporary with the papyrus or ostrakon to be transcribed, or ought we to depend wholly upon the history of the hieratic symbols, and to render these by the archaic hieroglyphs which were their ultimate originals²? In the sequel, we shall propose a course rather different from either of these alternatives.

So far as the Old Kingdom is concerned, the question barely arises. Hieratic is at that time nothing more than hieroglyphic cursively written; each hieratic sign has its own proper hieroglyphic counterpart, and doubts seldom occur. I shall say nothing here concerning the hieratic of the Middle Kingdom. In connection with the writing of that period, Dr. de Buck and myself will be confronted by many grave problems which must be settled before the final publication of the Coffin Texts can be begun. In the hieratic of the New Kingdom it is clear that, though there is much mutual interaction between this and the contemporary hieroglyphic, nevertheless the two modes of writing are essentially distinct, follow their own traditions, and are not immediately translatable the one into the other. Take, for example, the definite article *pj*; in hieratic this is never written without , whereas in hieroglyphic it is frequently so written. It is, indeed, an

¹ See the *Catalogue raisonné de types hiératiques de la fonderie de N. Tetterode, à Amsterdam. Dessinés par W. Pleyte*. Leyden: E. J. Brill, 1865.

² Various remarks in Möller's last article on the subject (*Zeitschr. f. äg. Spr.*, LVI, 34) shows that he favoured the latter alternative.














almost absolute rule in hieratic that the phonetic complements of biliteral signs should be employed; hieroglyphic is not nearly so consistent in this respect. Again, there are certain habits with regard to the employment of determinatives in hieratic which are by no means invariable in hieroglyphic; hieratic regularly writes while hieroglyphic often has simply . In dating, hieratic uses horizontal strokes for the units indicating the days of the month, e.g. while hieroglyphic employs vertical strokes, e.g. . These few examples suffice to show that, to a considerable extent at least, hieratic and hieroglyphic of the New Kingdom are separate, and not immediately convertible, systems. The conclusion may, I think, be drawn without further ado, *that the employment of a certain hieroglyph in New Kingdom inscriptions is no adequate reason for the employment of the same hieroglyph in transcribing the contemporary hieratic texts*¹. For example, New Kingdom hieroglyphic makes a fairly general practice of employing as the determinative of "enemy," and "death," or again as the determinative of "king" and its equivalents. It by no means follows that those signs should be used to reproduce the hieratic signs used in the same connections.

We thus already find ourselves in possession of a negative criterion by which we should be guided. In order to obtain guidance of a more positive kind we must begin by considering the reasons and purposes for which transcription is desiderated.


1. The first and foremost reason for transcription is undoubtedly *interpretation*. Hieratic hands vary greatly, and beginners always, and advanced students often, require to know what familiar character a particular hieratic sign or scrawl represents. Interpretation reduces diversity to unity, permits the comparison of one variant with another, facilitates translation, and performs a multitude of other valuable services. Interpretation is indisputably the primary function for which transcription is employed.

2. There is, however, another reason and purpose for transcription which is not so clearly and fully recognized by scholars, though it is of equal importance with the last. I refer to the *reproductive* function of transcription. Practical objections of various kinds—expense, printing difficulties, inaccessibility of the originals, etc.—besides the necessity of interpretation referred to above under 1, make the reproduction of hieratic in exact facsimile sometimes unnecessary, and on occasion definitely undesirable. How inconvenient a grammar of Late Egyptian would be, in which all the examples from papyri and ostraca were given in facsimile! Now in such admirable publications as Peet's *Mayer Papyri*, or the new volumes of the Turin papyri which we owe to Botti, Peet and Černý, the photographs of the original and the hieroglyphic transcription stand opposite one another, so that the latter can there only have the interpretative function. But do not let us be misguided into thinking that the editors of such publications ought to forget the reproductive purpose for which their transcriptions will of necessity be employed by others. Those very same transcriptions will frequently be quoted in linguistic essays, in articles on this or that archaeological or historical point, and so forth. When this is done, the reproductive function of transcription comes into play. The informed reader of such essays and articles will look to the quotations in question to serve as substitutes for the original hieratic; he will expect to be able thence to form a shrewd idea of what stands in the original. Unhappily this point has not been borne in mind by Sethe, the revered teacher of all of us, in several recent articles. Referring to a debated passage



¹ At the same time, the use of a given sign in hieroglyphic inscriptions may occasionally serve as a *contributory* or *additional* reason in its favour as a symbol to be employed in transcription. So in the cases of and quoted below, p. 51, and of quoted below, p. 52.




in the Mayer Papyri, he writes as follows: "Was Spiegelberg irreführt hat, ist die eigentümliche, aus übertriebener Vorsicht geborene Transkriptionsweise, die Peet für die zu Strichen, Haken und Punkten entarteten hieratischen Zeichen (an unserer Stelle z. B. in den Zeichengruppen , , ) anwendet: sie hat Spieg. verleitet, „ zu lesen, was in Wahrheit das Passivelement  darstellt. In richtiger Transkription lautet die Stelle so:  etc."¹ Whether Sethe is right or wrong in his interpretation of the passage in question is, for my present purpose, quite beside the point. What I am here inquiring is whether Peet did wisely or no in giving  as his transcription, rather than ². Emphatically yes, I reply. To have transcribed , as was the old custom of Egyptologists, still defended by Sethe, would have been to introduce far too subjective an element, the best proof being that so able a scholar as Spiegelberg had not recognized  in this passage, but had read (in my opinion at least as inadvisedly) . Sethe's statement that  is to be read, not , rests, of course, not on his recognition of what the scribe actually wrote, but on his acquaintance with other less cursively written passages of a similar type. Imagine a grammarian of Late Egyptian quoting  in this passage as an instance of the passive emphatic *šdm-f* from *iri*. On consulting the original he would be sadly disappointed, though he would get what he wanted from *Anast.* III, 1, 3. No! Let us resolutely hold to the position that every transcription of a hieratic text must be such that a grammarian may quote from it with confidence, and without recourse to the original manuscript. If this standpoint is adopted in transcriptions accompanying photographic or autographic facsimiles, still more must it be adopted when such facsimiles are dispensed with. Here I will touch upon another question of expediency. Late Egyptian hieratic is now so well known that in the case of easily legible, relatively "uncial" hands, it is really superfluous to publish every new document in facsimile. Our Egyptological libraries are already far too expensive. For many literary papyri all that is necessary is a good hieroglyphic transcription, leaving it to doubters to verify their doubts by consulting the originals or by inquiring from other scholars to whom the originals are accessible.
























To sum up, *our transcriptions of hieratic texts of the New Kingdom should at once provide an interpretation of the original hieratic, and also enable the reader to form in his mind a sufficiently good picture of the reading presented by the manuscript.* For my own part, I shall not hesitate to use dots and dashes and diacritical marks whenever these seem appropriate or will aid the reader's visualization of the original. Our transcriptions ought most emphatically not to be translations into contemporary hieroglyphic; *they are artificial substitutes for the actual manuscripts*, substitutes the fabrication of which must be directed by the twin principles of interpretation and reproduction.






























When the transcriptions are published by autographic process, there is as a rule no reason for not adhering to the original direction of the writing and to the exact relative position of the component signs. That is desirable both for collation with the original and for other purposes. When hieroglyphic type is employed, the necessary adjustments must of course be made, but I have already added to my fount the vague hieratic symbol , so common in the most cursive hieratic papyri, as well as certain others.

¹ *Zeitschr. f. äg. Spr.*, LIX, 60. *Op. cit.*, LXII, 12, Sethe expresses himself much more cautiously on the same subject.

² I should myself have preferred  or even . Perhaps the latter would be really an excess of caution, for no scholar will doubt that the phrase began with *iw*.

The conclusions formulated above are hardly likely to encounter much opposition, and indeed they won the approval of all the scholars with whom I was able to discuss the subject during the recent Oriental Congress at Oxford. Differences are likely to arise only over individual signs. Since, as I have said, our transcriptions ought to have a largely artificial character, there is wide scope for variations of personal preference. The following notes will indicate my own leanings, and I am glad to say that I have won over to my way of thinking Dr. Černý, with whom I have gone over the details in practically every case. Before turning to those details, let me emphasize one further point. *Anything which will tend to mark the artificial character of transcriptions from the hieratic, and their difference from contemporary hieroglyphic, is to be welcomed rather than the reverse.* When encountered in grammar and dictionary, hieratic passages will then stand out for what they really are. Thus I shall advocate the use of  rather than  for the definite article and its derivatives, as well as the reversed  with handle nearer the beginning of the line. These innovations will give our transcriptions an outlandish appearance; but this is a distinct advantage, for the reason just mentioned.











As a general rule, there seems no excuse for not adhering to the genetic original of a hieratic sign. Thus for  one should use  rather than , which latter could only be defended on the ground of its occurrence in contemporary hieroglyphic, a principle which we have rejected. Whenever the stick is clearly indicated  should be used and not , even where it is phonetic *i(i)m*, as in *Anast.* I, 1, 6:  may be employed where the stick has dwindled into nothingness. The horizontal date-numerals like  already referred to should be retained. For the plural strokes Möller's distinction between  and  (nos. 562, 563)¹ is to be observed. The signs for "write" and for *k* should have palette and handle respectively foremost;  not ,  not ². Sometimes a more modern form may be more useful than the archaic original, and in such cases a concession might be made. A fraction of time would be saved by using  rather than , but the latter is my choice. On the other hand,  is more serviceable than , this older form being liable to confusion with . I shall use  and  instead of  and  (or ), there being good hieroglyphic authority for the former and these bearing a closer resemblance to the hieratic shapes.






In many cases signs distinct in hieroglyphic have by the time of the New Kingdom become identical in hieratic. The interpretative principle demands that we should adopt the transcription which the context requires, the more so since no objection can be raised to this practice from the reproductive standpoint. Thus we shall transcribe  or  or  according to the needs of the context, though New Kingdom hieratic has one and the same sign for all three. Other examples of a like fusion are as follows: , , and  (see *Rec. trav.*, xxxix, 20); , , and  (for the two former I incline, however, to use  as having good hieroglyphic authority); ,  and ;  and ;  and ;  and  (in the last case  should be employed, unless the original has a clearly differentiated hieratic );  and  and  and ; sometimes  and ; sometimes  and .



































Occasionally, however, there seem to be good grounds for departing from the rule laid down in the preceding paragraph. The chief exception is the case of those signs which have come to be so cursively written, that the scribe was himself either ignorant of the

¹ The numbers thus quoted here and below refer to Möller, *Hieratische Paläographie*, II.

² Remember that our printed characters represent writing from left to right. Since we transcribe habitually from right to left, the forms shown by our types must be reversed.

origin of the strokes he used, or else considered their meaning as so obvious that it was unnecessary to write their originals with painstaking exactitude. The latter case is exemplified by  after cartouches, which in cursive papyri are indicated by four strokes, or even by five or six. Our transcripts must obviously reproduce the scribe's attitude towards these signs, so that mere strokes must be substituted for the more explicit . As an example of the case where the scribe was unaware of the origin of his spelling we may take , a common writing of *rmṯ* "men" in the New Kingdom. Genetically, this writing probably represents   , but to transcribe thus would of course be absurd. The first of the dashes is possibly an enlargement of the tick of \equiv ¹, while the second and third are probably derived from , a pair of ligatures in which  and  share the plural strokes between them. These determinatives were doubtless no longer recognized as such when  was added to the hieratic.

Other exceptions to the general rule are discussed in this and the following paragraphs.—The imperative *imī* "give" is best transcribed   , a writing found in hieroglyphic from the Eighteenth Dynasty onwards, since the form of the hieratic signs makes it quite certain in many cases that two *m*'s were intended; moreover, if the original biliteral component \Leftarrow were employed, it is not clear whether this should be placed before or after the *m*; in the Middle Kingdom both  \Leftarrow and \Leftarrow  occur.

A more knotty problem is the choice between  and . The hieratic  undoubtedly represents , the original hieroglyphic use of which is in connection with the stems *hni* and *tni*. In New Kingdom hieratic  occurs also in (1) the definite article *pj* and derivatives, in (2) the biliteral group  , and (3) as generic determinative of birds. In (2) there is really no reason at all for transcribing  , as I and others have hitherto done. The original was, of course,  , and the confusion of the middle bird with  may, as Möller suggested, have been due to the misunderstanding of the dot placed above  in some Eighteenth Dynasty MSS. It would be most inappropriate to transcribe the group as   (so in hieroglyphic, e.g. *Bilgai stela*), since New Egyptian hieratic has a quite different group  which is often employed as an alternative biliteral symbol for *bj* and which cannot be transcribed otherwise than . Thus   seems imposed upon us. Now the two birds in the group   always agree exactly with the writing of the definite article *pj*, so that it would seem almost self-contradictory to transcribe the latter as  , with the bird  which in hieroglyphs is the usual sign for *pj*. In point of fact the hieratic sign for *pj* shows the two wings above the body from the very earliest times, and there are sporadic hieroglyphic examples of  for  from the Sixth Dynasty onwards (*Meir*, IV, 4, right 8; *Sinai*, 90, 11; 139, 10; Louvre, C 11, C 12; *Koptos*, 8, 4). There seems no reason but old and bad habit for transcribing the hieratic as   rather than . Finally (3) the generic determinative  for "bird" (Möller, no. 217). In the early Eighteenth Dynasty no wings are shown, and then  is the best transcription. When in the Nineteenth and Twentieth Dynasties the wings are regularly shown, it seems obviously convenient to use  for the purpose. Thus we arrive at the satisfactory and easily-remembered conclusion that  should be transcribed as  in all cases³.

At this point I will deal with some other troublesome groups for birds. The hieratic

¹ The writing of *rmṯ* with \Leftarrow , not \Leftarrow , throughout the New Kingdom is curious, since as Dr. de Buck has shown me, the symbol \Leftarrow in the Coffin Texts is only used in those words in which *t* had not passed into *t*.

² *Op. cit.*, II, 1^o, n. 5, and *Zeitschr. f. ag. Spr.*, LVI, 41.

³ See *Zeitschr. f. ag. Spr.*, LVI, 41, for Möller's contrary view.

𐩺 is used both for 𐩺 *Gb* (Möller, no. 217 *bis*) and for 𐩺 *rhyt* (Möller, no. 201). In the latter case we must of course transcribe with 𐩺, but in the former case the reproductive purpose seems to require some mode of differentiating the bird *Gb* from the bird *st*, a differentiation which would easily be concealed in our handwriting unless we added some diacritical mark to the bird in the case of *Gb*. I propose to use for *Gb*, when written with 𐩺, some such symbol as 𐩺. For printing, the diacritical mark could be omitted.

Another difficult group is 𐩺. I propose to represent this by 𐩺 when "mother" is meant, but by 𐩺 or 𐩺 when these are demanded by the context.

When a squiggle—*sit venia verbo*—stands above the "bad" bird, this should be rendered by 𐩺 or by 𐩺, as the case demands.



After this digression I return to the exceptions to the rule that signs fused in hieratic should be transcribed by their genetic originals in accordance with the demands of the context. No attempt should be made to differentiate 𐩺 and 𐩺. The Coffin Texts employ 𐩺, properly 𐩺, both for *wn* and for *iml*, and they employ 𐩺, properly 𐩺, both for *iml* and for *wn*. Only the latter has survived into New Kingdom hieratic (Möller, no. 564), and should be rendered uniformly by 𐩺. Such indeed is the practice of the hieroglyphic inscriptions.



As is well known, 𐩺 (Möller, no. 521) has become a ligature wholly indistinguishable from 𐩺 *sn*. It is obviously misleading to transcribe the hieratic for *sn* as 𐩺 in Late Egyptian, since this would give an erroneous appearance of gemination to words like 𐩺 (original 𐩺). Scholars have therefore hitherto used the sign 𐩺 for 𐩺 with the value *sn*, imagining that 𐩺 was a hieroglyph created by the Egyptians themselves at a late period, when confronted by the same difficulty. Having searched the Late Egyptian hieroglyphic texts in vain for a good example of 𐩺, I applied to the Berlin Dictionary for help. Professors Sethe and Grapow were good enough to search through the Berlin materials for me, and were no less surprised than myself to discover that 𐩺 is a wholly fictitious hieroglyph, not existing at all on the monuments. The Ptolemaic stelae and temples use 𐩺 alike for *sn* and for *sn*. To follow their example would be very confusing to the beginner. I have had made for my fount a new sign 𐩺 to represent *sn*. It is much to be hoped that the origin and purpose of this purely artificial symbol will not again be forgotten!


The biliteral sign in *smw* "herbs" must ultimately be derived from 𐩺 (Sign-list M 21). In Late Egyptian, however, 𐩺 is used, the same sign being employed as the later form of the determinative for "back"; the assimilation goes back in hieroglyphic as far as the Twelfth Dynasty, see under 𐩺 F 37 in my Sign-list. It seems desirable to use 𐩺 for the hieratic sign common to both cases.










In the verb "to strike" we must use the late hieroglyph 𐩺, varying its direction and shape to suit the manuscript, see Möller, no. 16. I have shown in my article *Zeitschr. f. äg. Spr.*, XLIV, 126, that the hieratic sign in question was originally a portion of the striking man, which in course of time has become detached and in the Ptolemaic period becomes the specific sign for *hw* "strike." Möller may be right in thinking that the origin of the hieratic sign was the knotted girdle of the striking man (*Zeitschr. f. äg. Spr.*, LVI, 37)¹, but his rejection of my general contention (*ibid.*) is strangely wrong-headed. It was a surprise to find, when I first began to study the Coffin Texts, that the


¹ My attempts to verify this assertion have not, however, been successful, except for Nineteenth Dynasty, e.g. in the temple of Sethos I at Abydos.






form  existed even in those early times (ex. B 5 C, 117). A very early attempt to render this in hieroglyphic is , which I have found in Petrie, *Dendera*, XI A (earlier intermediate period).






As regards the plough and the signs for *rw* and *šnc* it will be best to use the lion  except when the hieratic sign shows the *two* handles of the plough (Möller, no. 468). In this case we must of course use .



Hieratic  occasions much difficulty in the Coffin Texts, much less in Late Egyptian. The right transcription will be found if we remember that the phonetic complement of biliteral signs is regularly found in hieratic, and that the deliberate writing of more than one *r* is most unlikely.











Many Late-Egyptian papyri distinguish between  and . The former is clearly intended for *hr* without *r*, since in the forms of the preposition with suffix (Erman, *Neuäg. Gramm.*, § 101) an *r* is added after the stroke, e.g., , . The origin of the horizontal stroke in  requires careful study. Is it the remains of an old  that has ceased to be recognized as such, or is it a corruption of the vertical stroke seen in some hieratic forms of *hr* down to the Eighteenth Dynasty (see *Zeitschr. f. äg. Spr.*, LVI, 40), or is it a mere space-filler? I do not know for certain. I had some thoughts of rendering  by , but on reconsideration I have come to the conclusion that this might confuse the student rather than help him. There seems no serious objection to the accepted transcription with simple .




If an original demanded  for *phrt*, I should not hesitate to write thus.


The group for  ought to be given so unless it has degenerated so far as to be completely indistinguishable from  (see Möller, no. 167, footnote 3); in the latter case  should be written without hesitation. The like holds of  and .

Along similar lines  for *sft* seems quite justifiable; hieratic of the New Kingdom has a characteristic form for , and we should transcribe according to what we see, without allowing ourselves to be solely guided by etymology. As regards , , and  we had best formulate no rules, but allow ourselves the liberty to use our discretion in individual cases.










As regards ligatures, it will be well to give the original component signs. This procedure yields the useful distinction between  for *š* and  for *š*. Where necessary, the word *lig.* may be written in small characters above the ligature in question. I favour the use of such abbreviated notes. The note *sic* is in common use, and my *Hieratic Texts* employed *tr.*, i.e. trace(s), above such signs as are only partly visible.











Hieratic has a number of differentiations unknown to hieroglyphic, and it would be a serious loss to ignore these. Thus  or  is used for *šw* as against  for *mštl*¹;  is written for initial phonetic *š*;  is employed for *idn* or as determinative, while *šdm* is written with , which I shall render with the simple . New types have been added to my fount to mark these differentiations². Like Möller (no. 47, n. 4), I do not believe that the sign for *mniw*, which I showed in *Zeitschr. f. äg. Spr.*, XLII, 119 to be differentiated from , is derived from , which apparently first occurs in hieroglyphic as det. of words for "travel," "wander," like *rw* and *šm* (Sign-list A 33). Nevertheless, the New Kingdom sculptors have adopted  for *mniw*, and there is no reason why we should not follow their example.

I have recently drawn attention to the different values of the loop  *šš* (V 6 in my Sign-list) and the bag  *ššr* or phonetic *g* or det. of *crf*, etc. (V 33). In hieratic  is

¹ Curiously enough, the Coffin Texts use  for *mštl*.

² See below, p. 95.

usually  (Möller, no. 520),  usually  (no. 520, footnote 1), but  as initial *g* in *Gbtyn* Koptos (no. 515). From passages quoted by Möller (no. 515, footnote 4), the hieratic det. of *rf* is , not, as one would expect, . For the purposes of transcription we require the three signs , , and ; the original manuscript will indicate which of these is to be used in individual cases.

As regards the forms of signs, we may often be able, in autographic transcription, to mark differences which could not well be indicated in type. We can, indeed, distinguish in type between  and , but it would be hypercritical to demand a separate type for those manuscripts which write  with the loop of cord pointing forward instead of backward. Similarly, we can differentiate in handwriting, but not well in type, between those determinatives of *hms* "sit down" which are completely identical with the child  and those in which the front hand is well away from the mouth. Lastly, certain signs like , ,  and  have often beneath them a small dash or dot, which is the borrowed relic of some  or  or the like that doubtless in other contexts had real significance. This dash or dot is perhaps best retained in autographic transcriptions, though it is not important enough to be retained when transcriptions are given in print.

The hints given above do not claim to cover the whole field. I shall have achieved my purpose if I have convinced my colleagues that the reproductive function of transcription is no whit less important than the interpretative function, and that transcriptions which have an outlandish and artificial appearance are *ipso facto* superior to those which create the illusion of being genuine translations into contemporary hieroglyphic.

NOTES ON THE REBURIAL OF TUTHMOSIS I

By H. E. WINLOCK

With Plates xi-xiv.

In a recent number of the *Bulletin of the Metropolitan Museum of Art*¹ I sketched briefly the career of Hatshepsut, as I conceive it to have been in the light of our excavations at Dêr el-Bahî. While this picture of the life of the queen was in substantial agreement with some of the earlier histories of ancient Egypt, it was seriously at variance with the more recent ones. However, in a report on excavations, primarily intended for a public which makes no pretence to a detailed knowledge of Egyptian archaeology, an extended statement of the evidence for or against the solution of such an historical problem would hardly have been appropriate, and the story of Hatshepsut written for the *Bulletin* necessarily appeared without citations of chapter and verse.

Nor are these now necessary, for since the *Bulletin* article was published the new edition of Eduard Meyer's history has appeared², reconstructing the lives of Hatshepsut and her immediate connections in terms almost identical with those used in our report³. And furthermore, Meyer supports his thesis by an outline, adequate enough for all practical purposes, of the arguments against the ingenious but rather artificial reconstruction of Hatshepsut's period which has been current during these last thirty years.

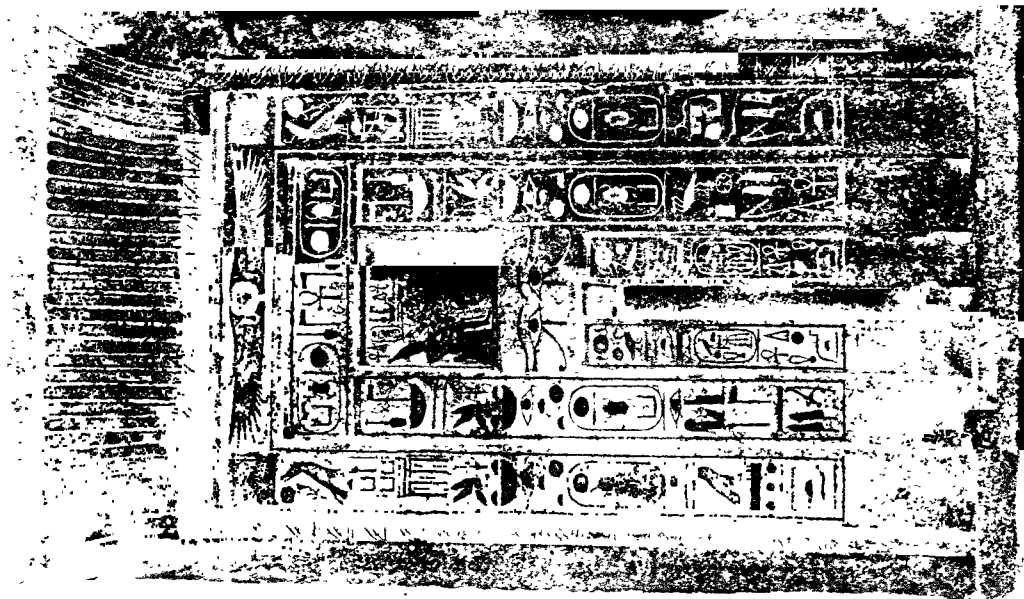
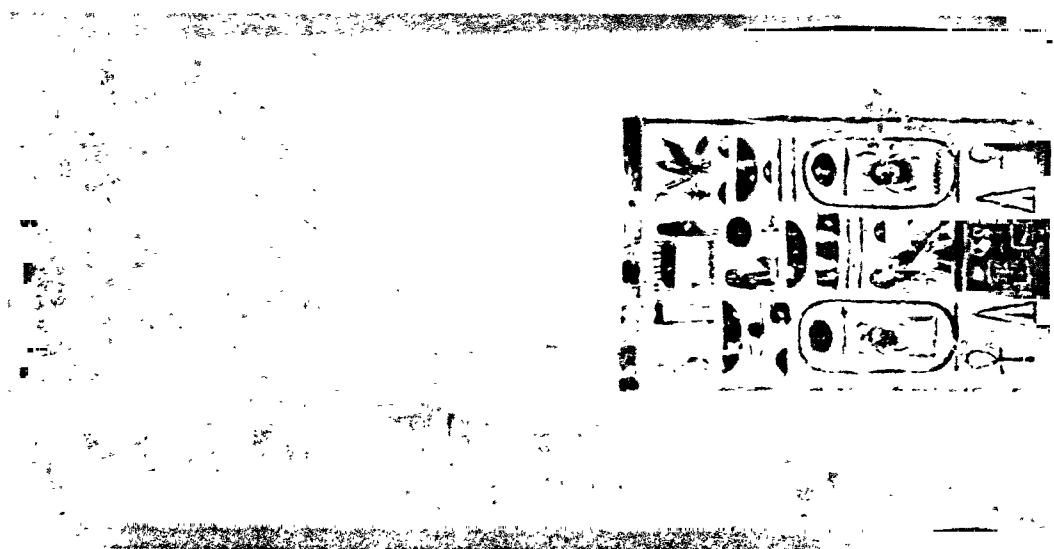
There remains, however, one episode in the history of the royal family which still requires elucidation—the burial of the king Tuthmosis I. A series of archaeological accidents has resulted in such confusion that Meyer⁴ is led to declare that “here there

¹ February, 1928, Section II, 46 ff.

² *Geschichte des Altertums*, Band II, 1928. The pertinent section begins on page 110.

³ The only significant detail on which Meyer differs from the *Bulletin* (which latter is here in agreement with Maspero, Naville and Petrie) is on the parentage of Tuthmosis III. On certain Karnak inscriptions of the later years of his reign (Sethe, *Urkunden*, iv, 697, 839 ff. = B., *A.R.*, II, §§ 478, 601 ff.) Tuthmosis III calls Tuthmosis I his “father,” and on the statue of Inebny (Sethe, *Urk.*, iv, 464 = B., *A.R.*, II, § 213) Tuthmosis III is called a brother of Hatshepsut, which amounts to the same thing as calling him a son of Tuthmosis I. In other Karnak inscriptions Tuthmosis III calls Tuthmosis II his “father” (Sethe, *Urk.*, iv, 180 = B., *A.R.*, II, § 595; *Urk.*, iv, 154, 604). Accepting the first group literally, Meyer (p. 112) believes that in the second group the term “father” means adopted-father only. In view of the frequently ambiguous use of the word “father” in Egyptian (often meaning “ancestor” or merely “predecessor”), a choice between these two groups of inscriptions would be difficult were it not for the emphatic statement in the biography of Ineny (Sethe, *Urk.*, iv, 59 = B., *A.R.*, II, §§ 118, 341) to the effect that Tuthmosis II was succeeded by the son whom he had *begotten*. Being to all intents and purposes contemporary with the accession of Tuthmosis III, and being a private document whose value as historical evidence is not vitiated by the faults common in official temple inscriptions, I take Ineny's biography as the most trustworthy of all extant evidence and conclude that Tuthmosis III was the son of Tuthmosis II. Hence I should take the statement of Inebny that Tuthmosis III and Hatshepsut were brother and sister as a contemporary fiction designed to explain the anomalous situation of the two co-rulers after Hatshepsut had adopted the style of “King” Maʿatkarê, and the statements of Tuthmosis III that Tuthmosis I was his “father” as meaning that the latter was merely one of his “forefathers.”

⁴ *Geschichte*, II, 116, n. 2.



1. Part of a wooden door from the temple Khnemet-ankh of Tuthmosis I, now in the Metropolitan Museum of New York *Scale c. 1/2*.
2. Granite stela of Tuthmosis I in the Louvre. *Scale c. 1/30*.

is still much that is not clear in detail. The construction of his rock-cut tomb in complete secrecy—'all alone, no one seeing or hearing'—is recounted by the architect Ineny. But his body, still preserved to us, has been moved many times. We have three coffins of the king. Hatshepsut had intended to transport him to her own tomb, and there had provided for him a coffin near her own, which coffin, however, was never used." And such is the state of the published material that Meyer's readers will find it difficult to improve upon his statement.

This unsatisfactory state of our knowledge of the mortuary monuments of Tuthmosis I goes back over a century. In 1826 Champollion had gone to Leghorn to take over Salt's second collection for the Louvre, and on March 29th of that year we find him examining a granite stela of Tuthmosis I (Pl. xi, fig. 2)¹. The inscriptions on this stela, entered in the Louvre under the number C 48, were published by Lepsius in 1842² and a brief description of it was given by de Rougé in 1860³. Since then, a collated republication of the important phrases of the inscriptions by Sethe⁴, quoted by Gauthier⁵, completes the bibliography of the monument, little effort, so far as I am aware, having been made to discover its provenance or to draw any conclusions as to its significance⁶.

The second Salt collection was formed between 1819 and 1824 by Yanni Athanasi, almost entirely in the Theban Necropolis. Yanni dug, among other places, in the neighbourhood of Dêr el-Baḥrî. In Dêr el-Baḥrî there are two chapels, one devoted to the funerary cult of Queen Hatshepsut, and beside it another intended for the funerary cult of her father, King Tuthmosis I⁷. The central object in the Hatshepsut chapel is a gigantic false-door stela of red granite standing on a slightly projecting pedestal which forms part of the west wall of the chapel (Pl. xii)⁸. The west wall of the Tuthmosis chapel has been torn out, obviously to remove a similar stela, but enough of the pedestal remains in place to show that the missing stela was of exactly the size of the one from the Salt collection in the Louvre. Furthermore, it is obvious that this latter stela comes from some such public chapel, where it has suffered mutilations of the names of Hatshepsut and of Amûn exactly similar to the mutilations made throughout Dêr el-Baḥrî. Finally, the site of the stela in this chapel of Tuthmosis I was standing open and exposed during the early nineteenth century when Athanasi was excavating in the neighbourhood⁹. All things considered, therefore, there can be little question that in the Louvre Stela C 48 we have the central element in the chapel erected by Hatshepsut for the mortuary cult of her father. Pl. xiii shows the stela restored to its original place.

If our information about the stela has been faulty, the available information about the sarcophagi of Tuthmosis I is in many ways not only confusing, but even misleading. In March, 1899, Loret found the tomb of Tuthmosis I in the Valley of the Kings, but as he resigned his position in Egypt very shortly afterwards, he seems never to have

¹ *Bibliothèque égyptologique*, xxx, 304, 319. I have to thank M. Boreux for courteously arranging that I should have a photograph of this stela.

² *Auswahl*, Pl. xi.

³ *Notice sommaire... du Louvre* (1860), 95.

⁴ *Urkunden*, iv, 313.

⁵ *Livre des rois*, II, 222.

⁶ Except in a passing reference in my *Bas-reliefs from the Temple of Rameses I at Abydos*, 32, note 2, and another in Davies, *Pugemré*, I, 95.

⁷ Naville, *Deir el Bahari*, v, Pl. cxxix.

⁸ The Hatshepsut stela was of the same type as the Tuthmosis I stela, Louvre C 48. Likewise of the same type is the Tuthmosis III stela, now at Medinat Habu, whither it was carried in ancient times in all probability from his mortuary temple.

⁹ See the description given by Naville in *Deir el Bahari, Introd. Mem.*, 2, and the early plans published by him in the same volume, the Hay MSS. in the British Museum, and the Nestor l'Hôte MSS. in the Louvre.

published anything on his discovery¹. Hence the quartzite sarcophagus and canopic box of the king, found in the tomb and at the time left there, have never been described (Pl. xiv). The lid of a canopic jar, an alabaster vase dedicated by Tuthmosis II, some fragments of glass and some inscribed blocks taken to Cairo were, however, published in the Cairo catalogue².

In March, 1903, Howard Carter, excavating for the Service des Antiquités with funds supplied by Theodore M. Davis, began the clearing of the tomb of Hatshepsut, and after months of arduous labour arrived at the burial chamber in March, 1904, where he discovered a sarcophagus and canopic box of the queen, and another sarcophagus of Tuthmosis I³. Scattered through the rubbish which choked the lower passages of the tomb he found fragments of stone vessels which had been made for Tuthmosis I⁴, for Hatshepsut while she still had no higher titles than those of a queen⁵, and others made after she had assumed the name of "King Maatkarê⁶." That the tomb itself was actually that of Maatkarê Hatshepsut was amply proved by the foundation deposit at the entrance.

At the successful conclusion of this excavation, M. Maspero was prevailed upon to grant to Mr. Davis some reward for his labours and some encouragement for their continuation. It was therefore arranged that the sarcophagus of Tuthmosis I which he had discovered in the tomb of Hatshepsut should be presented to the Boston Museum of Fine Arts, and that there should be taken to Cairo the sarcophagus and canopic box of Hatshepsut found by Davis in her tomb⁷, and the sarcophagus and canopic box of Tuthmosis I from his tomb, still lying where Loret had left them. All the three sarcophagi arrived at their destinations in the year 1905⁸. And yet, at this very time, when the facts should assuredly have been fresh in his mind, we find Maspero stating that the sarcophagus of Tuthmosis I in the Cairo Museum was the one found in the tomb of Hatshepsut⁹. This misstatement has been repeated without being verified¹⁰, and the luckless student, with no description of the Cairo Tuthmosis I sarcophagus found by Loret available, and uncontradicted statements that the Boston sarcophagus found by Davis was in Cairo, is left completely in the air as to what exists and where. Complicate this misinformation with an unfortunate jumbling by Gauthier of his notes on the

¹ The date of the discovery of the tomb was mentioned by Bénédict in the contemporary *Guide Joanne* (1900), 537, and by T. M. Davis, *Tomb of Hâtshopsîtâ*, xiv, who adds the fact of the discovery in it of the sarcophagus.

² The canopic box is No. 36416 in the Cairo *Livre d'entrée*. The canopic jar, etc. are Nos. 24975, 76, 81, and 90 in Daressy, *Fouilles dans la Vallée des Rois*.

³ The work is fully described by Davis, Naville and Carter, *Hâtshopsîtâ*, 1906.

⁴ *Op. cit.*, 108, Nos. 3, 4, 6. On this last see below.

⁵ *Op. cit.*, 110, Nos. 8, 9.

⁶ *Op. cit.*, 109, Nos. 5, 7, 10, 11, 12.

⁷ In the Cairo *Livre d'entrée* the sarcophagus has received the number 52459 and the canopic box 52460.

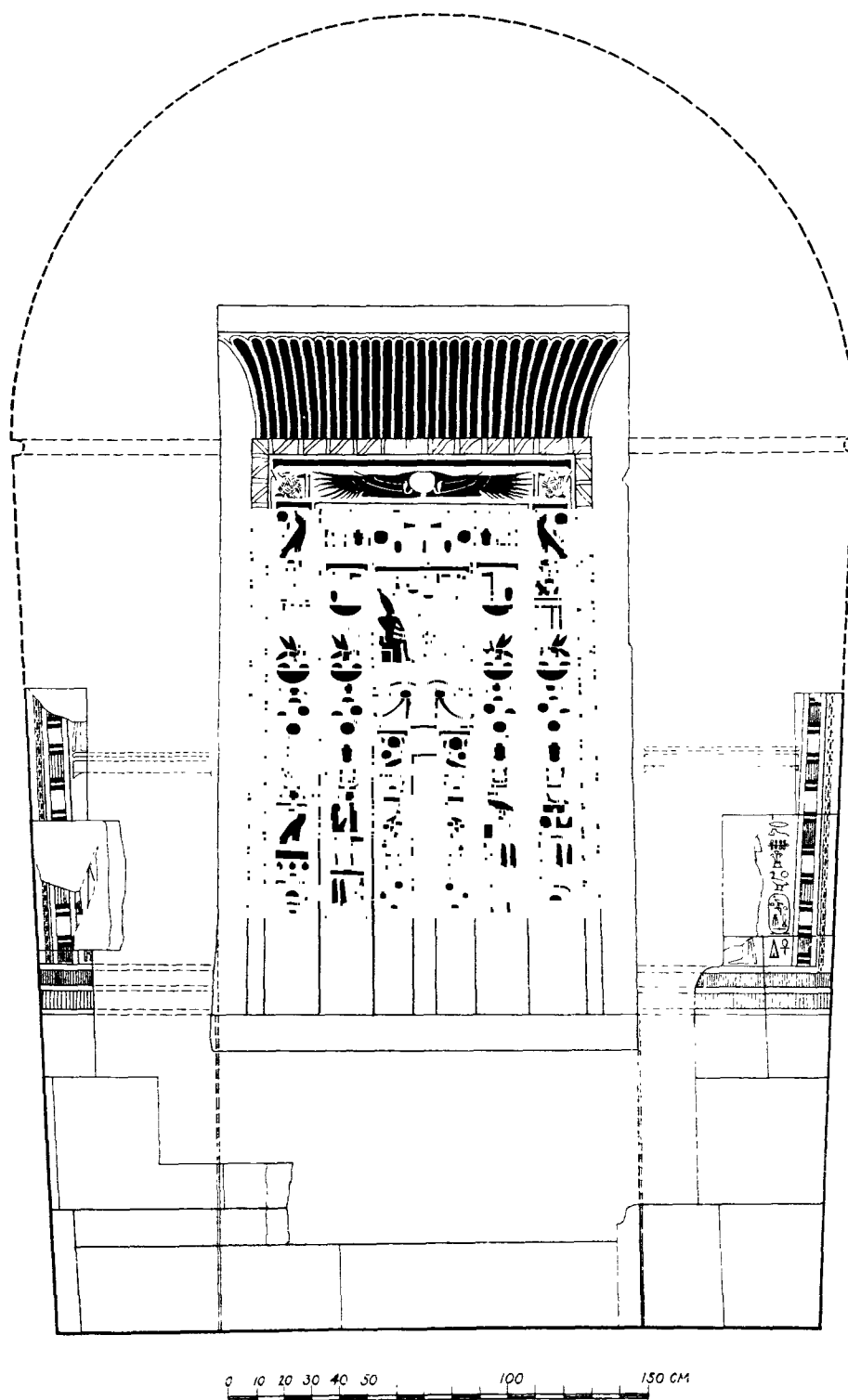
⁸ *Boston Museum of Fine Arts Bulletin*, April, 1905, 13.

⁹ *Guide to the Cairo Museum*, 1906, 146. The statement is no longer made in the *Guide* of 1915 (172), but neither is the true finding place—Loret's tomb of Tuthmosis I—stated, and the uninformed reader still remains in the dark. Nor would the *Livre d'entrée* have been of any help, for the sarcophagus was not entered in it until 1928, when it received the number 52344.

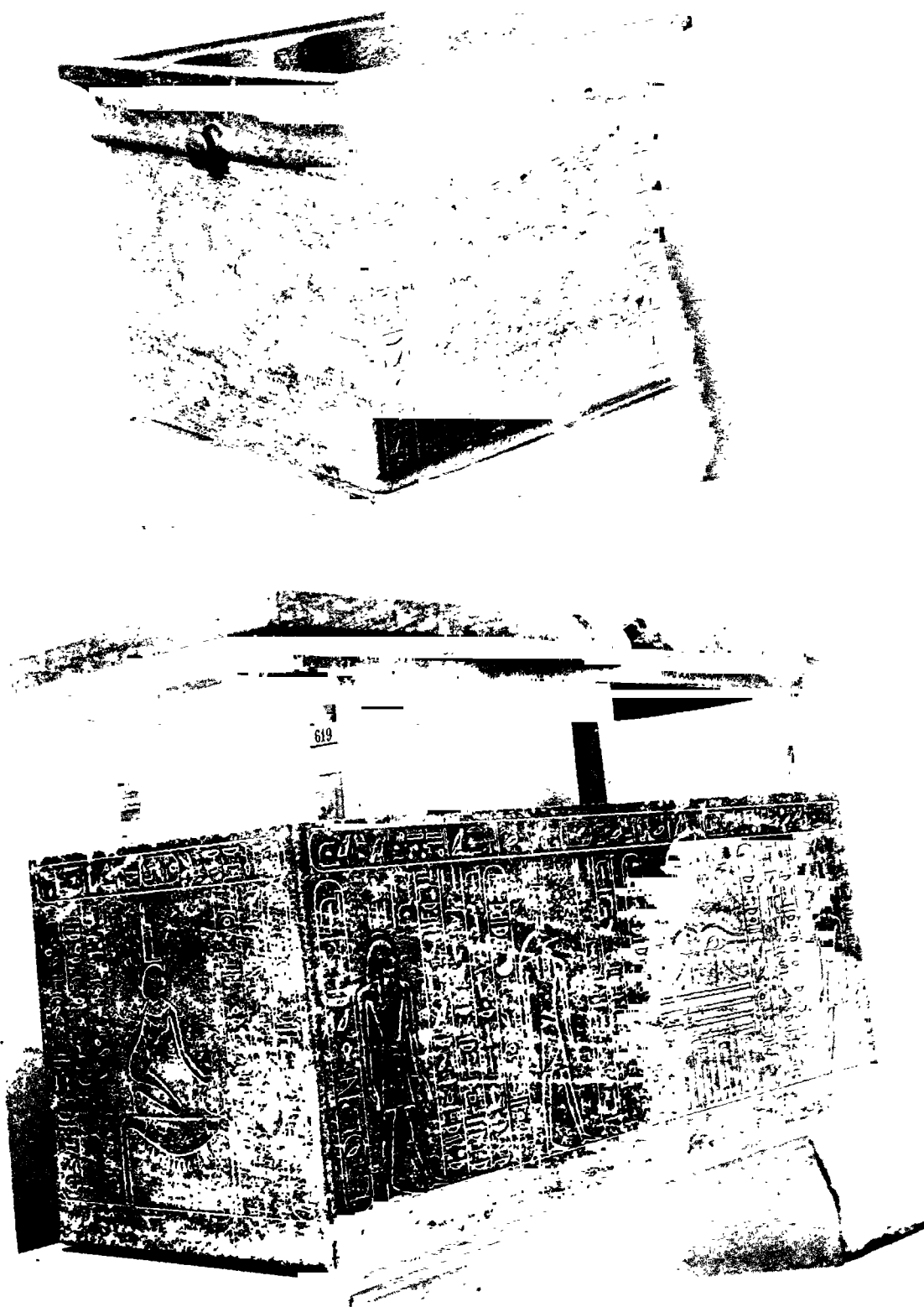
¹⁰ Thus Legrain, *Répertoire généalogique*, 40, and Gauthier, *Livre des rois*, II, 226, publish the inscriptions on the Boston sarcophagus (from the Davis publication) as being on the Cairo sarcophagus, and in the present *Baedeker* (1928), 304, where the Cairo sarcophagi are said to come from the tomb of Hatshepsut, the actual Cairo sarcophagus is stated to be still in the tomb of Tuthmosis I (305).



West wall and stela in the mortuary chapel of Hatshepsut at Dêr el-Bahrî




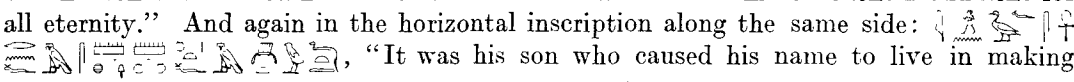
West wall of the mortuary chapel of Tuthmosis I at Dér el Bapri
with the Louvre Stela restored to its original place.



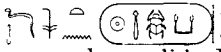
Canopic box and sarcophagus from the tomb of Tuthmosis I. Cairo Museum

Boston sarcophagus and those on the Tuthmosis I-Paynozem coffin¹, and Meyer's remark that all is not clear becomes an understatement of the case.

Now, however, with the circumstances of the discovery of the stela and the two sarcophagi of Tuthmosis I straightened out, we are in a position to study the history of his entombment.

So far as I am aware, no doubt has ever been expressed on the identity of the tomb found by Loret with that which Ineny secretly made for Tuthmosis I "in solitude, no one seeing and no one hearing²." The Loret tomb—in one of the remote recesses of the Valley of the Kings, which in Ineny's day was utterly desert without a single burial place within its entire extent—fulfils Ineny's description and, moreover, fits perfectly into its appropriate place in the development of the plan of the royal tombs. Hence the sarcophagus found in it, and now in Cairo, must be the one which was prepared for the original burial of Tuthmosis I. That it was actually completed by Ineny during the lifetime of his patron Tuthmosis I would seem to be doubtful, for we read upon the edge of the box along its right side: , "It was his son who caused his name to live and made for him this excellent monument for all eternity." And again in the horizontal inscription along the same side: , "It was his son who caused his name to live in making excellent the monument of (his) father for all eternity." If these are not merely stereotyped phrases—and of course they may be, since the name of the son is not given—then it would appear that this sarcophagus was at least decorated in the reign of Tuthmosis II. This latter, literal meaning would seem to be the probable one in view of the other objects provided by Tuthmosis II for his father's tomb.

The sarcophagus is an imposing monolith of yellow quartzite resting on an alabaster base, and is identical with those of Ma'atkarêr Hatshepsut, Tuthmosis III, Amenophis II, and Tuthmosis IV in its material and in the rounded head and squared feet which follow the outlines of the cartouche on its lid. In its choice and arrangement of texts it is practically identical with the two sarcophagi made a few years later for the tomb of Hatshepsut, and markedly different from that made nearly a century later for Tuthmosis IV.

Its great interest for the present investigation lies in its relation to the two wooden coffins of Tuthmosis I, eventually altered for Paynozem and afterwards deposited in the royal cache³. As has long been known, the outer of these two coffins bears under its veneer of Twenty-first Dynasty decorations traces of Eighteenth Dynasty motifs and an inscription down the middle of the lid beginning  etc., and exactly duplicating the inscription down the middle of the sarcophagus lid. When the dimensions of the two are tabulated:

Sarcophagus outside	Inside	First coffin outside
Length 250.5 cm.	235 cm.	228 cm.
Width 90.5 cm.	75.5-76.5 cm.	72.0 cm.
Height 92.5 cm.	86 cm.	about 80 cm. ⁴

¹ *Livre des rois*, II, 222. No. XLIII is from the sarcophagus and with it goes the reference to Davis and the first sentence of note 2. No. XLIV is from the coffin and with it goes the reference to Daressy and all the remaining references in note 2.

² Sethe, *Urk.*, IV, 57; B., *A.R.*, II, § 106.

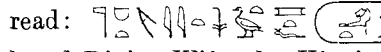
³ Daressy, *Cerueils des cachettes royales*, No. 61025. Daressy does not believe that the inner coffin belonged to Tuthmosis I. To me it does seem to have belonged to him. In any case, Tuthmosis I must have had a second coffin of about this size and the argument in this article will be based on its dimensions.

⁴ 70 cm. is the height at the head; the feet (now broken away) must have been higher.

it becomes almost certain that the coffin was made to fit within the sarcophagus. Thus we have the tomb, the sarcophagus and canopic box, and two of the coffins prepared by Tuthmosis I for his last resting-place.

We have in addition other articles from the burial furniture of Tuthmosis I which have a more definite historical value. Mention has already been made of an alabaster jar from his tomb, and of others of crystalline limestone found with the second sarcophagus of Tuthmosis I in the tomb of Hatshepsut, but which, as we shall see, were originally buried in the tomb of Tuthmosis I¹. Among them there are three on which the inscriptions, when they were complete, read with only minor variations:



a statement that the living Tuthmosis II made these jars as his memorials to his father, the deceased Tuthmosis I. Furthermore, a fourth fragment found with the two in the tomb of Hatshepsut² cannot be separated from this group in my judgment. On it we read:  "The beloved Divine Wife, the King's Daughter whom he loves, Hatsheps[ut, she lives!'] made (this) for her father King [Tuthmosis I, the true of voice]³ beloved of Osiris, Lord of Abydos."

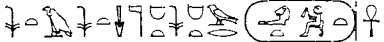
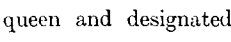
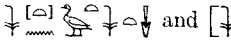
Taken together, these jars seem to me to establish incontestably the fact that Tuthmosis I was buried by his son and daughter, King Tuthmosis II and Queen Hatshepsut, before the latter had taken the style and titles of "King Ma'atkarê"⁴.

Thanks to the courtesy of Mr. Dows Dunham of the Boston Museum of Fine Arts, I have had ample opportunity to examine the sarcophagus of Tuthmosis I which Davis found in the tomb of Hatshepsut. Carter had noted that in some places the names of




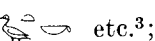
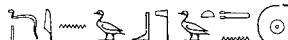
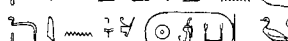
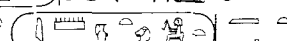











¹ From the tomb of Tuthmosis I, Daressy, *Fouilles dans la Vallée des Rois*, No. 24976, Gauthier, *Livre des rois*, II, 223; from the tomb of Hatshepsut, Davis, *Hâtshopsîtâ*, 79 and 108, Nos. 3, 4.

² Davis, *op. cit.*, 109, No. 6.

³ The identity of the father of Hatshepsut is so well established that this restoration cannot be doubted.

⁴ This association of Tuthmosis II and Queen Hatshepsut (an association which without much doubt denotes their marriage) has been vigorously denied. Nevertheless it might be inferred from the biography of Ineny, where it is stated that on the death of Tuthmosis II Hatshepsut became regent—a succession improbable unless she was the widow. But even more definite evidence for the marriage of Hatshepsut to Tuthmosis II exists. On the Berlin stela 15699 (Sethe, *Urk.*, IV, 143; *Ägypt. Inschriften*, Berlin, II, 103; Meyer, *Geschichte*, II, 112, note 1, on its value as evidence) Tuthmosis II is followed by the widow of his predecessor, "The King's Great Wife, the King's Mother, Ahmose" and by  presumably his own wife. In the same relationship to Tuthmosis II, Hatshepsut appears again on a structure in Karnak of which parts were discovered by Legrain in 1903, but which has never been published. (Mentioned by Legrain in *Ann. Serv.*, 1904, 272; *Arch. Report*, 1903-4, 25; *Rec. de trav.*, 1905, 62; described by Naville in Davis, *Hâtshopsîtâ*, 15, 18, 43, 56.) Several of the blocks in 1928 still lie near the VII Pylon where Legrain found them. Tuthmosis II appears on two of them offering to Amûn. On one of these two blocks appears the name of Hatshepsut's daughter Neferurê. On two other blocks, obviously from the same structure, Hatshepsut herself appears clad as a queen and designated  and . The Berlin stela and the Karnak monument serve as mutual confirmations, the one of the other, and taken at their face value are evidence of Hatshepsut's marriage to Tuthmosis II and of Tuthmosis's fatherhood of Hatshepsut's daughter Neferurê.

the queen were visible beneath those of the king¹, and when I came to verify that fact I found that there were evidences of very much more extensive alterations to the sarcophagus than the publication indicates.

On the outside of the lid there is no difficulty in seeing that the inscription originally started  etc., and the six dedications to the genii and Anubis still begin ². On the inside of the lid the original reading of the long inscription was ..... etc.³; inside the bottom of the sarcophagus  etc., and around the top edge of the box  etc.;  etc.;  etc.⁴ To alter these names into those of Tuthmosis I the Horus name and the nomen cartouches were completely filled with red plaster and then entirely recarved, while the prenomens merely required the filling up of the  and the carving over it of . In all cases the feminine ending  was obliterated with plaster, the group  being recarved . The  has been changed to  and  or  to .

On the outside of the box of the sarcophagus such fillings and recarvings would probably have been too evident, and a new surface was therefore made by cutting away fully 3 cm. from each side. This is clearly demonstrated by the fact that the inscriptions along the top edge of the box are now at the outer margin of the stone instead of being in the centre, and further from the fact that the cartouche which covers the entire lid originally had a double oval which has been altered to a single one by cutting away the entire outer band along the sides. From the foot end only 1 cm. was removed and from the head $\frac{1}{2}$ cm., but both alterations are clear enough in the present unsymmetrical appearance of the inscriptions on the top edge of the box. In short, the sarcophagus was originally 6 cm. wider and 1.5 cm. longer than it now is, and all the inscriptions on the outer surface are subsequent to this alteration. On the inside of the box the sides, like those of the other sarcophagus from this same tomb, had originally been left plain and here no alteration was necessary. Hence the inside width of the box remains as it was made—just great enough to take the rabbet on the under side of the lid. The ends, however, being decorated, about 3.5 cm. had to be cut away from each inside end surface, except along the top edges where the original thickness of the stone was left in order that the lid might fit snugly. The new surfaces were then redecorated. This recutting has made the inside length along the bottom of the sarcophagus from 203 to 204 cm., but this was subsequently discovered to be insufficient, and more stone was gouged away until a length of 210 cm. down the middle was obtained, after which the end surfaces were decorated still a third time⁵.

Since the Boston sarcophagus of Tuthmosis I was originally intended for Maꜣatkarē Hatshepsut, we find ourselves in possession of three separate sarcophagi of the queen—first, one in Cairo, made for her while she was merely a royal consort⁶; second, this one

¹ Davis, *Hatshepsut*, 91. Professor Sethe called my attention to this statement of Carter's, which I had overlooked, nor had I seen the alterations on the sarcophagus itself when I made the casual examination of it which inspired my footnote in *Bull. Met. Mus.*, Feb., 1928, Sect. II, 54.

² Davis, *op. cit.*, 81.

³ *Op. cit.*, 86.

⁴ *Op. cit.*, 91.

⁵ *Op. cit.*, 87, 89.


⁶ Carter, *Journal*, IV, 115-116. Cairo, *Livre d'entrée*, 47032.

in Boston, made for her as Maʿatkarē and altered to serve for Tuthmosis I; and third, again in Cairo, and also made for her as Maʿatkarē. These last two were those found by Davis in her tomb.

The measurements of the three sarcophagi are instructive:

	First, as Queen	Second, as Maʿatkarē (as originally made)	Third, as Maʿatkarē
Length over all	197-199 cm.	222.5 cm.	245-246 cm.
Width „	72-73 cm.	88.5 cm.	88 cm.
Height „	90 cm.	89.5 cm.	100 cm.

The increasing size is interesting. Starting out as a queen with a sarcophagus that would hold only a comparatively small coffin (less than 182 cm. long), she ends with a third sarcophagus which would hold a coffin almost as large as that of Tuthmosis I (not over 220 cm. long). But this is not all, for in addition there is a change in type. Even though both of her first two sarcophagi are probably later than the sarcophagus from the tomb of Tuthmosis I, both of them are simple rectangular boxes, while that of Tuthmosis I has the cartouche-shaped curved head and square feet characteristic of every king's sarcophagus from that of Tuthmosis I to that of Tuthmosis IV¹. Even Hatshepsut's third and last sarcophagus conforms to this cartouche-shaped type. Is it too much to conclude that the rectangular type was a queen's type of sarcophagus, and that Hatshepsut's second sarcophagus was made so soon after her assumption of the name of "King Maʿatkarē" that it still conformed to the queen's pattern?

As for the circumstances under which this second sarcophagus was altered for the body of Tuthmosis I, they are clearly set forth in an inscription on the outside, obviously part of the alteration itself²:  stating that Hatshepsut had made this sarcophagus as a monument for her beloved father, King Tuthmosis I. Why she should feel it incumbent on herself to provide a new sarcophagus for her father—even though she wanted to move his body—is a point which requires a deeper insight into Egyptian motives than we possess. Possibly the difficulty of raising a massive weight *up* out of a tomb was greater than her engineers cared to undertake. Perhaps Hatshepsut already contemplated making for herself her third sarcophagus, on a scale more in keeping with her new position. Or it may be that the translation of the body of Tuthmosis I to his new resting-place was to be made the occasion of a second burial ceremony, in which case a sarcophagus ready prepared was an essential part of the new tomb, and the time which would be required to transport the original sarcophagus from the first tomb to the second would have caused an undesirable delay in the proceedings.

In any case, the new sarcophagus was not adapted to the whole set of coffins in which the body of Tuthmosis I lay in its original resting-place. The space available for a coffin in the Boston sarcophagus, even after the last alterations were made, was only 210 cm. long × 64 cm. wide × 64.5 cm. high. The outermost Tuthmosis I coffin is 18 cm. longer than

¹ The sarcophagus lid of Amenophis III is still cartouche-shaped, but differs somewhat from those of his predecessors.

² Davis, *Hatshepsut*, 83. On the Cairo Tuthmosis I and third Hatshepsut sarcophagi the space where the dedication is placed on the Boston sarcophagus is occupied by the LXXII Chapter of the Book of the Dead which, on the Boston sarcophagus, has to be placed inside (*op. cit.*, 87-8) to make room for the dedication inscription. This circumstance, as well as the appearance of the dedication inscription, show that the latter was planned as part of the restoration.

this, and since even the second is 2 cm. longer, neither of the existing coffins of the Tuthmosis I-Paynozem set could have been put into it. On the other hand, the clearly unplanned-for final lengthening of the sarcophagus indicates an unforeseen emergency which should not have arisen if a new coffin had been prepared to its measure. It would seem, therefore, that the body was brought in a third coffin, now lost, which would not fit into a space 203 cm. long but would go into one 210 cm. in length. That such an innermost coffin must have existed is evident from another consideration. The mummy of Tuthmosis I is only 154.5 cm. tall¹, while the second coffin of the Tuthmosis I-Paynozem set is 212 cm. long². Tutankhamūn's mummy, with a stature of 163 cm., required a length of only about 180 cm. inside the third, gold coffin to hold the mummy wrapped and masked³. If the wrappings of Tuthmosis I were anything like those of Tutankhamūn, there still remains a difference in length between his finished mummy and the second coffin in the existing set of over 35 cm.—ample space for a third coffin, even of wood instead of the much thinner metal used for Tutankhamūn.

Meyer makes the statement that the sarcophagus prepared by Hatshepsut for Tuthmosis I was never used⁴. Certainly no evidence as to whether it had been used or not can be drawn from the object itself, while the inference to be drawn from the relevant circumstances, as I see them, is just the opposite of Meyer's statement. The alabaster jars dedicated by Tuthmosis II and Hatshepsut to their father originally must have been deposited in the latter's tomb, where one of them remained until 1899. If three others had been brought to the tomb of Hatshepsut, surely it was only with the body of Tuthmosis I. Again there is the circumstance of the final lengthening of the new sarcophagus for Tuthmosis I, the obvious explanation of which is that when they were brought to the tomb of Hatshepsut it was found that the body and coffin of Tuthmosis I would not fit into it. And lastly there is the redecoration of the outer coffins for Paynozem. This was not the sort of emergency repairing which was so often done in the confusion of the moving of the royal mummies. These coffins have been methodically and elaborately re-gilded and inlaid—not merely daubed over with paint to cover up the ravages of the tomb robbers. Under these circumstances it is hard to conceive of their being appropriated for Paynozem if the mummy of Tuthmosis I were still in them, but it is quite understandable that they should have been put to a new use if they had been left behind in the empty tomb after the moving of the body of Tuthmosis I to the tomb of Hatshepsut.

¹ Elliot-Smith, *Royal Mummies*, 27. Even if its identification be questioned, the fact remains that all the men of the family were very short, and therefore we may assume that the length of the mummy of Tuthmosis I did not differ materially from this figure.

² Daressy, *Cercueils des cachettes royales*, 61025.

³ Carter, *Tut-ankh-Amen*, II, 228, 362.

⁴ *Geschichte*, II, 116, n. 2. Perhaps he was inspired to make this statement by an idea (*ibid.*, n. 3; cf. Davis, *Hatshepsut*, xiv) that the tomb of Hatshepsut had never been finished, because it contained no decoration when discovered. The same was true of the tomb of Amenophis I, and practically so of that of Tuthmosis I (*Buedeker*, 1928, 305), and yet they seem to have been finished. Repeated flooding, from which the tomb of Hatshepsut seems to have suffered (Davis, *op. cit.*, 79), would have destroyed all stucco in the burial chamber, as it nearly did in the tomb of Tuthmosis I. At least one element of decoration was completed in the tomb of Hatshepsut which existed in the tomb of Tuthmosis I (Daressy, *Fouilles dans la Vallée des Rois*, No. 24990; Davis, *op. cit.*, xiv, 80). This was a collection of mortuary texts inscribed on limestone blocks found scattered in the crypt. They seem to appear also in the early tomb of Hatshepsut (Carter, *Journal*, IV, 114).

My personal opinion of what happened would be somewhat as follows. When Hatshepsut assumed the name and style of "King Ma'atkarē"—about the 8th year of Tuthmosis III—she began the construction of her temple at Dêr el-Bahrî¹, charging Senmut with that task and Hapuseneb with the excavation of her tomb behind it in the Valley of the Kings. For political purposes it was desirable to associate her name as closely as possible with that of her father, Tuthmosis I, and this could be accomplished most effectually by associating him in her mortuary cult. It was decided, therefore, to translate the body of Tuthmosis I to her tomb, much as in the Middle Ages the bodies of the saints were translated from the Holy Land to Europe to enhance the sanctity of the new cathedrals. There was a sarcophagus already prepared for Hatshepsut in her new tomb, and this was altered for Tuthmosis I. Its size was such, however, that even after being lengthened it would only hold the innermost coffin of the king, and the outer two coffins were left perforce in the king's own tomb. Doubtless all the tomb furniture of Tuthmosis I should have been brought with his body, but either because the transport was negligently conducted or because the tomb of Tuthmosis I had already been robbed and much of the furniture broken, actually a number of things were left behind². In the course of time Hatshepsut was buried beside her father, and there both lay until the gathering up of the royal mummies under the later Ramessides, when, presumably, the bodies of both were moved³. Meantime, the empty coffins of Tuthmosis I remained in his sarcophagus in the abandoned tomb. There they were stripped of their gold, but as the wood remained serviceable even after five centuries, they were taken over and refurbished at a time when coffins were required for Paynozem. Eventually both the bodies of Tuthmosis I and of Paynozem found their way to the royal cache, by which time the name of Tuthmosis I on his old coffins had been laid bare once more through the theft of Paynozem's gold leaf from them. By a strange fate, this was noticed by the priests who sorted out the coffins and mummies in the cache, and after five centuries the body of Tuthmosis I was returned to his own coffins, and it was in his own coffins that he was found in modern times.

The translation of the body of Tuthmosis I to the tomb of Hatshepsut only accomplished part of her purpose. His mortuary cult was to be joined to hers, and an offering chapel was constructed beside her own in the Dêr el-Bahrî temple where she could officiate at his services during her own lifetime and where the priests of her foundation could continue to officiate after her death. It is amusing to note, however, that in spite of all her pious solicitude for her father's memory, Hatshepsut prepared a chapel for him much smaller than her own, just as she supplied him with her own cast-off sarcophagus which she, so to speak, had outgrown.

The Louvre stela, as we have seen, was the central point in this chapel—the altar-piece before which the offerings were laid, and the door through which the soul of the dead might come forth to partake of the provisions set out for him. As such it is made to represent conventionally the door of a house, upon the frame of which the names of the dead king were displayed, and through a window above which he was to be seen, given life by Amūn. However, for the purposes of this study the interest in the stela

¹ *Bull. Met. Mus.*, Feb., 1928, Sect. II, 26, 52 ff.

² Note the objects from the tomb mentioned above on page 58.


³ This must be true, of course, if the mummy supposed to be that of Tuthmosis I is really his. It is probable in the case of Hatshepsut from the circumstance of a box of hers being found in the royal cache (Maspero, *Mummies royales*, 584). Whether her body still exists or not, is a question.

lies in the dedication inscribed on its right-hand side¹: etc., setting forth the fact that this chapel—like the sarcophagus buried far beneath the mountain behind it—was a monument which **Maatkarê** Hatshepsut had erected in memory of her father, Tuthmosis I.

The chapel and stela of Tuthmosis I lead us naturally into an investigation of the still existing data on the mortuary cult of Tuthmosis I.

An independent hierarchy for the mortuary services of Tuthmosis I seems to have existed from the period immediately following his death, into the Nineteenth Dynasty when, probably, the cult of this king was taken over by the "Servants of the Place of Truth." I print as an appendix to this article (p. 68) a list of the priests of this hierarchy known to me.

In the beginning the cult must have been centred in a mortuary temple prepared by Tuthmosis I himself—or at latest by Tuthmosis II shortly after his father's death. It is a perfectly well-recognised fact that the tomb in the Valley would not have been complete without its chapel, and we have no reason to suppose that a king who occupied the throne for a score or more of years would have failed to provide himself with such a shrine. Later we have found Hatshepsut building a chapel within her own temple for her father's services, but considering that over twenty years had elapsed since his death we cannot suppose that this was the first chapel where these services were celebrated. Thus, in the end, the cult must have had two shrines, and Davies has noticed a point which may well reflect this condition. The Chief Prophets numbered 8 to 12 in my list are all represented in Tomb 51 and those numbered 13 to 15 in Tomb 31. Some of these Chief Prophets may have been of different generations. Thus 11 is the son of 10; 8 may be identical with 4 and a more or less distant ancestor of 10; and again 12 is presumably a later intruder in the tomb. But even so, there remain at least six Chief Prophets of Tuthmosis I under the two kings Seti I and Ramesses II, and Davies suggests that this may be the result of the existence of more than one cult-place³.

One such cult-place appears in the list of priests. Nos. 5, 10, and 16 give it a name elsewhere written more fully ⁴. We meet with a priest of Amūn in this temple under Tuthmosis III⁵, and in the tombs of Puyemrēr and Rekhmirēr, dating from the later years of the reign of Tuthmosis III, we find it listed among the Theban temples sharing in the endowments of Amūn. We do not find it, however, among such temples at the beginning of the reign, as listed in the tomb of Ineny⁶.

Probably from this very cult-place comes part of one valve of a double door, now in the Metropolitan Museum⁷ (Pl. xi, fig. 1). Here we find the names of Amūn and Tuthmosis I

¹ Apparently the same inscription was started on the left side, for the Horus name of Hatshepsut had already been carved in the upper left-hand corner before the Horus name of Tuthmosis I was substituted for it.

² This unusual name appears on the obelisk of Tuthmosis I (Sethe, *Urk.*, iv, 94; Gauthier, *Livre des rois*, II, 217) as an alternative to the better known one.






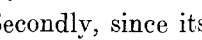
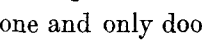

³ *Two Ramesside Tombs*, 13, n. 2. In *Puyemré*, II, 85 he had doubted the possibility.

⁴ On a fragment of Eighteenth Dynasty relief in Naville, *XVIII Dynasty Temple at Deir el Bahari*, III, Pl. xvi.

⁵ Sethe, *Urk.*, IV, 1225.

⁶ See the analysis of these three lists in Davies, *Pygmye*, II, 78 ff.

⁷ M.M.A. 22. 2. 26; purchased in Kurnah. It may have come from Dirā' Abū'l-Nega. It has been mentioned by Davies, *op. cit.*, 84. The doorway in which it was hung must have been 128 cm. wide—the

opposed by that of Tuthmosis II, "in *Okheperkarē*-endued-with-life." However, since Tuthmosis II is here described as  and as the inscription once read  , obviously it was originally *Maatkarē* who occupied his place. Thus the earliest mention of *Khmet-ankh* is on this door made for it by *Maatkarē*, but to conclude from this that she was the founder of the chapel is risky. To do so is tantamount to identifying it with the chapel provided for Tuthmosis I in the Temple of Dêr el-Baḥrî¹, and to this identification there are two serious objections. Firstly, the Dêr el-Baḥrî chapel is named on its entrance     

C. The mortuary chapel of the tomb was probably called *Okheperkarē-khnemet-ankh*, and may have been located between the Amenophis I Temple and the foot of the Dêr el-Baḥrî causeway. Hatshepsut may have enlarged it some time after she assumed the name of Maꜣatkarē, in the reign of Tuthmosis III.

D. A tomb (found by Carter in 1916) and a sarcophagus (now in Cairo) had been provided for Hatshepsut when she was still bearing the titles of a queen—probably the wife of Tuthmosis II.

E. About the 8th year of Tuthmosis III, at the time when Hatshepsut adopted the name of Maꜣatkarē, she caused Hapuseneb to construct for her the new tomb, No. 20 in the Valley of the Kings (excavated in 1903–4 by Davis and Carter). For this tomb a sarcophagus was made on the model of the earlier sarcophagus.

F. For political purposes Hatshepsut desired to establish the cult of Tuthmosis I in her own temple, which she had caused Senmut to construct at Dêr el-Baḥrî. She therefore had a chapel in it, next to her own, set aside for his cult. The stela of this chapel was discovered by Athanasi about 1820 and sold to the Louvre by Salt.

G. The sarcophagus prepared for Hatshepsut in Tomb 20 was altered for Tuthmosis I some twenty or thirty years after his death, when his body, in its inner coffin only, was translated to the tomb of Hatshepsut and laid to rest in the altered sarcophagus. With it was brought much of his original funeral furniture. This sarcophagus is now in Boston and of the funeral furniture three fragments of alabaster jars are in Cairo.

H. Hatshepsut had made for her tomb a new sarcophagus, of the king's type, which is now in Cairo. In this she was probably buried beside her father, Tuthmosis I.

Note: I am indebted to several of my colleagues for assistance in the above investigations: to Harry Burton for the photographs appearing in Pls. xii and xiv; to Walter Hauser for the drawing, Pl. xiii, and for tracings of the plans of Dêr el-Baḥrî in the Hay and Nestor l'Hôte MSS, and to William C. Hayes for copies of the inscriptions on the Cairo Tuthmosis I sarcophagus.

APPENDIX.

MORTUARY PRIESTS OF TUTHMOSIS I.

No.	NAME	TITLE	DATE	SOURCE
1	Musc		Early XVIII Dyn.	Bibliography in <i>Journal</i> , x, 248, n. 2
2	Okheperkarē-nefer...		Grandfather of No. 4?	Griffith, <i>Proc. Soc. Bibl. Arch.</i> , 110; Legrain, <i>Ann. Serv.</i> , 1907, 261
3	Nakhte		Maatkarē Hatshepsut	Legrain, <i>Répertoire généalogique</i> , No. 76
4	Okheperkarē-seneb		Maatkarē and later	Same as No. 2
5	Khaemwast		Tuthmosis III	Sethe, <i>Urk.</i> , iv, 136, 954
6	Sebeknakhte		Tuthmosis III	Champollion, <i>Notices</i> , II, 513
7	Amenhotpe		Tuthmosis III—Akhenaten	M.M.A. 17. 2. 6; unpublished
8	Okheperkarē-seneb		Either No. 4 or another of same name, before Seti I	Davies, <i>Two Ramesside Tombs</i> , 13, Pl. xi
9	Nebmehit	Same as No. 8	Seti I or earlier	Same
10	Woserhēt		Seti I	Same, and <i>op. cit.</i> , 26, Pl. xiii (22, Pl. xvi?)
11	Dhutnose	Same as No. 8	Son of No. 9	<i>Op. cit.</i> , 9, Pl. vii
12	Amenmose		Later than Seti I	<i>Op. cit.</i> , p. 27, Pl. xiii; Daressy, <i>Cones funéraires</i> (<i>Mem. miss.</i> , VIII), No. 93
13	Nehy		Ramesses II	L., <i>D.</i> , Texte, III, 264
14	Yuy	Same as No. 13	Same	<i>Op. cit.</i> , 263, "Yuy"; 264, "Yay"
15	Neferhotpe	Same as No. 13	Same	263, "Āakheperurā?"; 264
16	Nito		?	Daressy, <i>Cones funéraires</i> , No. 261, <i>Āgypt. Inschriften</i> , Berlin, II, 297

MEROITIC STUDIES VI

BY F. LL. GRIFFITH.

(*Continued from vol. XI, p. 224.*)

THE GRAFFITI OF THE DODECASCHOENUS.

It has been my ambition for some time past to publish a complete collection of the demotic graffiti of the Nubian border of Egypt, partly because amongst them are records which throw light on Meroitic and the Meroites. This ambition has been stimulated by the extreme generosity of Egyptological friends who have put me in temporary possession of very large collections of material for it. These helpful friends are Professor Erman and Professor Grapow, representing the Berlin Academy which owns the great collection of squeezes made by Lepsius' expedition in 1843-1844; Professor J. J. Hess of Zürich, who worked single-handed on the spot in 1893-1894, bringing back a magnificent collection of squeezes; Professor Spiegelberg of Munich, who made another collection at Philae in the following year; and Professor Roeder of Hildesheim, who made a complete record of the Dakke temple for the Egyptian government in 1910. Further, Dr. Gardiner has lent me his costly series of photographs of Philae taken by the Nubian expeditions of the Berlin Academy in 1908-9. These materials have now been sorted and catalogued, and Mrs. Griffith is engaged in the heavy task of drawing the graffiti from the squeezes. In all we find records, good or bad, of about 420 separate graffiti. About fifty of these are from Dakke, about twenty are from various less important sites, and the remainder, some 350, are from the holy island of Philae. They are of all sizes and degrees, ranging from a single name or an unfinished scribble of a word or two to a magnificent record of twenty-six long lines of small writing. Out of the 420 only about a score refer to Meroites, and most of these have been long known through the publications of Lepsius and Brugsch; yet new information results from re-examination of squeezes. I hope, if possible, to complete the collection by a visit to the region next year, one of the principal objects being to fix the exact position of each graffito that still survives after the many injuries which have been inflicted upon the temples of the Dodecaschoenus in recent years by flooding, ruin and restoration.

Some new identifications.

1. *Shashimete* is a title found in Meroitic descriptions of persons, sometimes in connection with the name of a deity and therefore characterized as a "sacerdotal title" in the index of *Karanòg*, VI. It occurs, written *ssmt*,¹ in demotic graffiti, not however in those of the third century which have been so productive of Meroitic names and titles, but in two earlier ones, both unpublished. One is from Kalabsha(?)²; the other, at

¹ The Meroitic **𐩣** letter transcribed *s* often corresponds to *s* and seems to be nothing more than *s*, while **𐩣𐩣** is *se*, as it were **𐩣𐩣**. See *Journal*, III, 117.

² From a loose block the provenance of which is at present uncertain.

Philae, is dated in the reign of the Emperor Claudius, 48 A.D. In the latter the *shashimele*, who was evidently a man of high position, is named after the individual who united the offices of *lemēshe* (strategus) and *rēt* (agent), being a kind of nomarch over the Dodecaschoenus; but the context is not yet clear to me. Both of these *shashimetes* bore Egyptian names, Pakhnūm and Petephawt, and probably belonged to the Dodecaschoenus or perhaps to the Meroite border just southward.



2. On the roof of the Birth-House at Philae is engraved a pair of feet with two short and very late inscriptions, demotic above, Meroitic at the side, both unfortunately much worn. In the demotic one can read "The feet of Esmēt (Σμῆθις) [son of?], the prophet of Isis"; in the Meroitic (*Inscr.* 116) *štqē: Smeti:* "feet of Smithis," followed by groups of less obvious meaning. Two other inscriptions near-by (*Inscr.* 114, 117) begin with the same words *štqē: Smeti:*, 117 ending with "the prophet in Philae," or perhaps "of her that is in Philae," so confirming the identification of the demotic name.

3. Professor Sayce's identification of the name Meroë in a group 435Λ53 in the great inscription of Akinirar, where my alphabet would give Mezawi, is now fully justified (see next section). Thereby we gain another geographical equation, the Meroitic name of Amara, Pereme (formerly read *Pezeme*) obviously identical with the Πρῆμις or Πρῆμυς μεγάλη of Ptolemy.



4. We further gain a very valuable equation of the king Taqrire-amani (hitherto read as Taqrize-amani), on the square blocks from Meroë now in the Ashmolean Museum, with *Tqrrmn* in the demotic of the long inscription of Pasan at Philae. The latter proves that the Meroitic king was active in the second and third years of the emperor Trebonianus Gallus, 252-3 A.D., a date pointed out by Professor Hess just forty years ago in the Berlin *Zeitschrift*; the squares of Taqrire-amani (Garstang, *Meroë*, Pls. xxv-xxvii, lxv-lxvii) are inscribed in the latest style of Meroitic writing, characterized by the signs being strongly slanted and prolonged laterally.

Professor Reisner has found that Taqrire-amani was buried at Meroë in Pyr. No. 53 of Lepsius, see *Journal*, ix, 157. The date of 252-3 A.D. brings us near to the decline of the Meroitic kingdom under the raids of the untameable Blemmyes and the pressure of the Axumite kingdom. For the early period, it may be recalled, we have a definite date of c. 23 B.C. for the archaic inscriptions of Teritegas, Amenirenas-Candace and the prince Akinirar, one of which refers to Augustus as Romaïos (*i.e.* Ρωμαῖος), like contemporary Egyptian inscriptions (*Hromaïos*) at Kalabsha and Denderah; these Meroite royalties are found at Meroë and also at Dakke (Pselchis) to which the Meroites had pushed forward their advanced base for the fateful attack on the frontier posts in Egypt.




The Eye of Horus in the Alphabet.


In a table of values of the Meroitic alphabet in *Karanòg*, *The Meroitic Inscriptions of Shablāl and Karanòg*, p. 11, I left only one value with a question mark (although there were and still are plenty of details to settle as to pronunciation), namely *z* for , *Λ*, giving such evidence as I could find regarding it on p. 16. *Λ* was the only letter for which I could find no equation either from Greek or Egyptian transcripts of Meroitic words or from Meroitic transcripts of Greek or Egyptian words. Cases, however, were quoted in which , *Λ* varied with *ʒ*, indicating that the former was a dental of some kind, and as *z* was not to be found elsewhere in the alphabet I proposed that letter as its equivalent. Four years later Professor Sayce, in a very suggestive note on the great stela found by Garstang at Meroë, proposed to read this character as "*rh* or

The real equivalent of λ , z , in Egyptian hieroglyphic and demotic is $\ominus r$, for

Another form of the same name is *485858*, *585858*, *Bezawi*, god Amenap, second-third cent. A.D. at Shablul Medik and Philae = hierogl.  , Stela of Nestosen (Schäfer, *Aethiop. Königsinschrift*, p. 27) = *Περωε* in Old Coptic (Preisendanz, *P.G.M.* IV, 14).

(c) King 4R352: 5R4W139, Tqrize-amni in "Lion temple" at Meroë = dem.
 at Philae, L. D. VI, no. 21, A.D. 252.

Anyone who will study the list of equations given in *Karanòg*, VI, pp. 8-10, and the further list in *Journal*, III, 113-115, will find the Meroitic character \equiv , ω , rendering *r*, in the Egyptian names of Osiris Horus and Hathor, and in the Egyptian title *wr-thn*; it also renders the Greek ρ in 'Ρώμη, doubtless through the medium of the Egyptian \square . On the other hand, there is no equation showing λ rendering *r* or any other sound in a Greek or Egyptian word. One may conclude from this that the sound of λ was foreign to Egyptian, but to the Egyptian ear at least resembled an *r*. As to Greek, I have something further to say. One might guess the value of the λ to be something like *Hr*, "Horus," since it pictures the Eye of Horus, but in that case one would expect it to be used in spelling the initial of 'Ρώμη, Eg. \square  . A better guide is I think found in the obvious connexions with *t*, of which I have given instances in earlier discussions, as will be seen from the following:

¹ Lord Prudhoe's copy in 1828 of the best preserved line (Prudhoe MSS., iv, 13-15) shows the top almost complete, confirming the rather obvious restoration "Ama]ni in Pereme" given in *Mer. Inscr.*, II, p. 11, 

god Mandulis as they heard it. Unfortunately I have not so far been able to find the name of Mandulis in Meroitic; but this is not surprising, considering that his sanctuaries lay outside the Meroite realm which terminated at the southern end of the Dodecaschoenus.

But there is another name which gives a more convincing result. At Dakke (*Mer. Inscr.* No. 92) and Meroë (*Mer.* 12 c)¹ the queen Amenirenas is entitled ⲉⲗⲁⲛ , i.e. *Kandákē*, while on the great stela her title is ⲉⲃⲁⲛ , *Kandawē* (?) (*Akin. St.* 1). This queen is evidently the one recorded by Strabo. Another queen, Amanitēre, who from the style of the cursive writing on a stela (*Mer. Inscr.* No. 126) must be considerably later, of the first or second century A.D., is entitled ⲕⲁⲛⲧⲁⲕ , *Kantak*, in her pyramid-temple and ⲕⲓⲕⲉ , *Kike*, on the Lion Temple at Naga. ⲁ seems to show variation or alternation with ⲉ in Meroitic and ⲉ with ⲛ , and with ⲛ ⲛ .

I think one may conclude that ⲁ is nearly *d*, (*n*)*d*, but not identical with it, for the $\nu\delta$ of *Ἀρενδώτης* is rendered by *Aretate*, and not by ⲁ , in the only Meroitic instances recorded. The equivalence of Egyptian *r*, too, shows a different tendency. It is perhaps worth while to note that *p* becomes *ṣ* before *u* in Old Nubian, and that the cerebral *r* of India is said to be found in some African languages².

It is pretty clear that *z* was not represented in the Meroitic alphabet. ⲗ occurs in the Egyptian cartouche-name of Azkheramani at Debôd, and ⲗ in that of *Knrc̣* at Meroë; but these are of middle Ptolemaic age, and may well belong to another language than Meroitic. No such sound occurs in demotic transcriptions of foreign names of the Roman period in the Dodecaschoenus. True Meroitic has as yet been traced back only to the second half of the first century B.C., the earliest example of all being perhaps the graffito at Buhen (*Mer. Inscr.* No. 86), which is older in style than the inscriptions of Akinirar.

We must now find some symbol to represent the rather evasive sound of ⲁ , ⲁ in transcription. A combination of *d* and *r*, thus *ḏ*, would be appropriate to the evidence; but *ṛ* may serve, and for ordinary purposes of quotation (apart from Candace) we can Egyptianize conveniently by rendering it with a plain *r*.

Mandulis, Talmis and the Blemmyes.

The temple of Kalabsha can teach us little regarding the Meroites while the great Meroitic inscription of king Kharamarēye on its façade remains undeciphered; but having referred in the preceding section to the god Mandulis, I will seize upon this reference as an excuse for discussing under the head of "Meroitic Studies" the significance of the town, temple and god of Talmis. The position of Talmis is not favourable for a large settlement, the Nile valley there being narrow and rocky with little space for cultivation. Yet following on a Ptolemaic foundation, Augustus built here the greatest of all the late temples of Lower Nubia, and the Blemmyes chose Talmis for the capital during their short tenure of power in the Nile valley round about the fourth century A.D. These facts seem to require explanation.

The name of the principal deity of Kalabsha "Mandulis, lord of Talmis" (ⲙⲁⲛⲧⲁⲗⲓⲥ) is ordinarily spelt ⲙⲛⲣⲱⲗ in Egyptian hieroglyphic of the Ptolemaic and Roman periods, but sometimes ⲙⲛⲣⲱⲗ , ⲙⲛⲣⲱⲗ (*sic*), *Mnrwl* are found where *Trms* is

¹ *Journal*, iv, 164.

² See also Zyhlarz, *Grundzuge der Nubischen Grammatik in Christlichen Fruhmittelalter*, pp. 9, 10.

spelt out in alphabetic characters¹ (Gauthier, *Kalabscha*, p. 126, etc.). In demotic of the Roman period we have *Mrwle* and *Melwle*, and once at the end of the fourth century A.D. at Philae *Mtwle*, no doubt for *M[n]twle*. With the spellings *Mrwl*, *Mnrwl* we may compare the remarkable Boheiric form *ⲙⲉⲛⲣⲉ* of the Egyptian root *mr* "love." Mandulis is sometimes entitled *wr mr* "great of love" (Gauthier, pp. 37, 38, etc.), and in a Greek hymn he is called Ἀθηνᾶς ἀγάπημα, "Athene's darling" (*ib.* 246), where Athene must be Buto, consort of Mandulis, wearing the Lower Egyptian crown like Neith (Athene). But although this may be a play on the name of the god, the name itself looks and sounds non-Egyptian, and puts Mandulis in a quite exceptional place amongst the deities of the Dodecaschoenus, for all the others (except perhaps one with an indecipherable name *Rmry*, *Hnr*?, also at Kalabsha, Gauthier, Pls. lxiii, lxiv) have distinctly Egyptian names.

Mandulis has an adult form and a youthful form (*Mrwl-p-hrd*), but neither of these in the representations bears obvious marks of foreign origin. Their titles and inscriptions, however, are more significant. Mandulis gives to the Emperor all the products of Puani (Arabia?) (Gauthier, pp. 20, 23), or *To-ntr* and its products (*ib.* pp. 100, 114, 155), and he is "great of love in *To-ntr*" (p. 37). "great god come from *To-ntr*" (pp. 45, 94, 116, 155, 162), "divine child come from Puani" (p. 130), "come from the east" (pp. 161, 162, 163, 164). Mandulis the youth "beautifies the two lands when he comes forth from Bekh" (p. 55). He was probably looked upon as a solar god (cf. Blackman, *Dendūr*, p. 80), but the eastern connexion is constantly harped on² and even his consort Uto (Buto) is made to give the products of *To-ntr* (Gauthier, p. 116, etc.). A foreign connexion, too, is seen in his frequent title "very great among the deserts (or foreign peoples)" (Gauthier, pp. 43, 104, 108, 148, 155, 164, 165).

The Ptolemaic and Roman temples of the Dodecaschoenus, south of the island of Philae, form a long series on the West Bank of the Nile as far as Maharraqa, but curiously enough on the East Bank there is nothing to correspond to them except the remnant of a single Ptolemaic-Roman temple at Aḡūala, described by Mr. Weigall and by Dr. Blackman in his *Dendūr*. Now this temple is only some ten kilometres south from that at Kalabsha, and it was dedicated to the same deity, Mandulis. In earlier times, too, we find one or two fortresses and a few fortress-temples placed on the East Bank, but many temples built or rock-cut on the West Bank. The fertile ground was probably about equal on the two sides of the Nile, but on the west sandy deserts made a very efficient protection against Libyan raids in the days before camel transport was plentiful. On the east side there was much more animal and vegetable life among the hills and wādīs than now, and the untamable nomads of that region, Meza-Blemmy-Bēga, though useful on occasion, were also a constant source of danger. Perhaps this explains the rarity of temples on the east bank.

To resume the results so far reached: we appear to have in Ptolemaic and Roman times in the Dodecaschoenus one solitary temple on the East Bank at the modern Aḡūala dedicated to a god with eastern affinities and barbarian name, Mandulis. On the West Bank is a long series of temples of the same age, but the largest of them is at Talmis, a few miles north of Aḡūala, and dedicated to the same unique eastern divinity.

¹ Talmis seems to occur in demotic at Aḡūala, spelt *Tlms*, and perhaps in Meroitic spelt *Trms* at Kalabsha (*Mer. Inscr.* No. 94, at end of line 2).

² Against this is to be set only one reference to the west (Gauthier, p. 126), "great power at the head of the western land," which is perhaps simply a scribe's error for "eastern."

Incapable of civilisation as were the Blemmyes, they had their uses at least as fighting men in the Egyptian army, as police, and as guides through the desert, and it was desirable to provide means of negotiating with them. Was not this the aim of Philadelphus in building a shrine to the strange god, attracting the nomads to worship there with the Egyptians on the East Bank of the great river? On the far bank the Ptolemies, and again the prudent Augustus, authorized the building of an imposing temple wherein the most solemn pacts could be ratified in surroundings that would awe the barbarians, somewhat as Philae served in later times. The spot selected for it was barren enough to please the town-shunning Blemmyes. Centuries later, when the Blemmyes were masters of this part of the Nile valley and even settled in it "from Primis to Telēlis (Shellāl)"¹, they naturally adopted the temple of Talmis and its surroundings for their capital and for the residences of their rulers and priests.

Amongst the few blocks that remain of the temple at Aḡūala, two graffiti have been found; one in demotic, one in Greek with barbarous name. What a contrast does this furnish to the great temple of Talmis whereon the abundant graffiti, in Greek or even in Latin, record the piety of soldiers and others, but all with Greek or Roman names! There is not, in the whole temple of Talmis, a single graffito in demotic, nor is there one in Greek or Latin to commemorate an Egyptian. At Aḡūala the Blemmyes mingled with the Egyptians. At Talmis there was no Egyptian settlement, but apparently the peoples of Nubia could there meet with the military and civil authorities of the government on solemn occasions. A remarkable representation of two leading Meroitic divinities, Amūn of Napata and Ammon of Primis, on the north wall of the pro-cella (Gauthier, Pl. xxxvi, A. and p. 112), may have been placed there for the benefit of the Meroites.

To regularize the situation, Mandulis had been taken by the Egyptian priests into the Osiris-Isis family as son of Horus, and was specially associated with Uto (Buto), the nurse of Horus. Isis and Osiris are leading deities both at Aḡūala and at Kalabsha; we may recall Procopius' statement that the Blemmyes and Nobatae of his day worshipped all the Hellenistic gods, with Isis, Osiris and Priapus (*i.e.* Amūn?), and that the Blemmyes offered human sacrifices to the Sun². Perhaps the Sun was none other than Mandulis.

The low culture of the Blemmyes is seen in the extraordinarily scanty and miserable records which they left at Talmis (Gauthier, p. 189). The author of the *Fihrist*, writing at the end of the tenth century A.D., states that their nomad successors, the Beḡa, had a mode of writing, but that he had never seen an example of it. Beyond a very few inscriptions and documents written chiefly by Egyptian and Coptic scribes on leather in debased Greek, and some graves covered with heaps of stones, they seem to have bequeathed nothing to the world except a reputation for barbarism. Otherwise the proofs of the thesis that I have proposed might have been much clearer.

¹ So Olympiodorus, the Silco inscription and apparently the Meroitic inscription of Kharamarēye; see my *Meroitic Inscriptions*, II, 30. Kharamarēye might mean "beloved of Horus (?)" in Meroitic, but Khar is a conspicuous element in Blemmy royal names.

² See the useful collection of extracts from classical authors and inscriptions printed in Woolley and Randall-McIver, *Karānōg*, III, 102.

A NEW SPEECH OF LYSIAS

By H. J. M. MILNE

The orator Lysias is credited by Plutarch with as many as 425 speeches, and even reputable critics in antiquity admitted 233 as genuine. Of these a considerable number, about 170, are known by name and 34 are still extant. As might be expected, new works of this prolific author have already emerged from the rubbish-heaps of Egypt, at Hibeh (Pap. Hib. 14), and at Oxyrhynchus (Pap. Oxy. 1606), and the latter site has again, from its inexhaustible stores, furnished us with the new text, unknown even by name before, which forms the chief subject of the present article.

The papyrus, now in the British Museum, has received the inventory number 2852, and consists of a leaf from a codex, imperfect on all sides save perhaps the right margin. On the recto are remains of two columns, on the verso of one, written in a rounded flowing hand which may be dated as of the early 4th century A.D. The fragment measures 17.5 cm. \times 18.5 cm. (extreme dimensions), width of right margin 5 cm., of column 7 cm. The number of letters in the line varies from 15 to 21, but averages from 17 to 19. Punctuation is marked by paragraphus and spacing, *e.g.* in lines 54, 60. Iota adscript is omitted; otherwise the orthography is correct except for the usual confusion of ϵ and ι . The common contraction for ν at the end of the line, a horizontal stroke over the preceding vowel, is employed in several instances. The position of the leaf in the codex may be inferred from the fact that the text on the recto precedes the text on the verso. Early books were usually composed of a single quire, formed by placing a number of papyrus sheets one above another, recto upwards, then folding them over to form a single gathering. In consequence verso precedes recto for the first half of the book, and recto verso for the second half, where our fragment no doubt belongs. Quires of many sheets are known; the great Hermas papyrus in the Michigan Library had over 40, perhaps even 50, presumably forming a single quire, in spite of the clumsiness of such an arrangement.

Two speeches are represented. Of the first, no. 1 of the extant orations, only a few words and line-endings survive, with the subscription. Even these meagre remains, however, suffice to raise several textual points which are indicated in the notes. The evidence thus supplied is at least eight centuries earlier than our only real MS. authority, the 12th-century Heidelberg codex, and does not support the changes proposed by Herwerden. The new speech, of which the title is fortunately preserved, was written on behalf of Eryximachus, charged with "having remained in the city." From the few lines preserved we cannot follow the trend of defence, as the speaker gets no further than preliminary protestations of having ventured person and property in the public cause. The occasion of the charge can, however, hardly be in doubt, but must refer to events at the time of the Thirty Tyrants who gained control of Athens at the end of the Peloponnesian War. It is tempting to identify Eryximachus with the medical man of that name who is known to us from the *Symposium* and other dialogues of Plato and who, as a lover of culture, may be presumed to have had leanings towards the aristocratic party. In any case, and for whatever reason, he failed to leave the city when the seizure of the Piraeus by Thrasybulus

at the head of the triumphant democratic exiles led to a general exodus from Athens to join the ascendant party. Lysias himself had early fled from the exactions of the Tyrants, barely escaping with his life, and was one of the most active supporters of the democratic refugees. In spite of the amnesty which followed the restoration of the democracy, difficult times must have supervened for people like Eryximachus with hearts suspect of lukewarmness. Pettifoggers and blackmailers we know were active and evidently succeeded in bringing him before the law. His defence, had it survived entire, might have shed further light on the personal background of a critical period.

Col. i (Recto)

[....] νομίζω γενέ[σθαι]
 [τὴν] τιμωρίαν, ἀλλ' ὑπὲρ
 [τῆς πόλεως ἀπάσης· οἱ γ]ὰρ
 [τοιαῦτα πράττοντες] ὁρῶ(ν)-
 5 [τες οἷα τὰ ἄθλα πρόκειτ]αι
 [τῶν τοιούτων ἀμαρτημ]ά-
 [των ἦττον εἰς τοὺς ἄλ-]
 [λους ἐξαμαρτανήσο]ν-
 [ται ἐὰν καὶ ὑμᾶς ὁρῶσι]
 10 [τὴν αὐτὴν ἔχοντας γνώ]μη(ν).
 [εἰ δὲ μή, πολὺ κά]λλειον
 [τοὺς μὲν κειμένο]νς νό-
 [μους

Col. ii (Recto)

[ἀ]πολογία
 περὶ τοῦ Ἐρατοσθέ-
 15 νους φόνου
 ὑπὲρ Ἐρυξιμά-
 χου μείναντος
 ἐν ἅστει
 μάλιστα μὲν ἐβουλόμη(ν),
 20 ὧ ἄνδρες δικασταί, μὴ
 κινδυνεύειν μήτε ἰδίᾳ
 πρὸς τῶν πολιτῶν μη-

1. MSS. οἷκ ἰδίαν ὑπὲρ ἑμαντοῦ νομίζω ταύτην: the Pap. perhaps ὑπὲρ ἑμαντοῦ ἰδίαν. 2. ἀλλὰ <κοινὴν> Herwerden, needlessly. 4. τὰ τοιαῦτα Herwerden, but there is no room here for τὰ. Pap. ορῶ. 7-10. The division of the lines is conjectural. 8. ν uncertain. Close beneath it are traces like σι, perhaps a superscript addition or correction of the subsequent line, or a record of the alternative reading ἐξαμαρτανήσουσι. 10. Pap. μῆ most likely. MSS. γνώμην ἔχοντας, but that order does not fit into the lines as reconstituted. 11. Read κάλλιον. 16. Pap. ὑπερ. 19. Pap. ἐβουλομῆ. 22. Read πολιτῶν.

δένα μήτε δημοσίᾳ πρὸς
 τὴν πόλιν, εἰ δὲ μή, τοῦ-
 25 το γούν ἐμαυτῷ συνειδέ-
 [ναι ὅτι ο]ὐδὲν ἀδικῶν
 [εἰς ἀγῶνα καθ]έστηκα.
 [.....γνῶν]αι, ὦ ἄν-
 [δρες δικασταί,].ν
 30 [.....]ν

Col. iii (Verso)

[.]ν[
 [.]ν[
 [.]ν[
 [.]ντ[
 35 [.]τ[
 ξον[
 κατη[γορ..... ἀπολο-]
 γήσομαι· [οὐ γὰρ διὰ τὴν]
 τῶν ἐχθρῶν ποι[η]ρ[ίαν]
 40 ἀξιῶ σώζεσθαι ἀλλὰ
 πολὺ μᾶ[λλον] διὰ τὴν ἐ-
 μαυτοῦ χρηστότητα. διὰ
 τοῦτο γὰρ καὶ τῷ σώματι
 π[ο]λλοὺς ὑπὲρ ὑμῶν κι(ν)-
 45 δύνους ἐκινδύνευσα,
 καὶ τῶν πατρῶων πολλὰ
 προθύμως εἰς ὑμᾶς
 ἀνήλωσα, ἵνα καὶ ἡ πόλις
 κατὰ τοῦμὸν μέρος εὐδ[αί]-
 50 μων εἴη, καὶ εἴ ποτε ἀδίκ[ω]ς
 εἰς ἀγῶνα κατασταίην
 θαρρῶν περὶ τῶν ἐμαυ-
 τῷ πεπραγμένων λό-
 γον διδοίην. ῥάδιον μὲ(ν)
 55 οὖν γνῶναι, ὦ ἄνδρες δι-
 κασταί, ὅτι εἴπερ ἐδύναμ-
 το οἱ κατήγοροι ἰδ[ί]α ἐμὲ]
 ἀδικοῦντα ἐ[φευρεῖν οὐ-]
 κ ἄν τις [
 60 τὴν [

27. Cf. line 51. 28. Cf. line 55. 44. Pap. ὑπερ ὑμῶν κτ. 47. Pap. ὑμας. 48. Pap. ἵνα.
 54. Pap. με. 57. Pap. τδ.

A NEW PORTRAIT-HEAD OF TUTHMOSIS III(?) AT BERLIN, AND THE PORTRAITS OF HATSHEPSUT

By H. R. HALL

With Plates xv and xvi.

In September of last year I asked my colleague at Berlin, Professor Schäfer, his opinion of the new portrait of Tuthmosis III (or Hatshepsut), published by me in this *Journal*, XIII, 133 ff., which Professor Capart and I had independently identified among the less known sculptures in the British Museum. With his customary kindness he replied as follows: "Ich kann Ihnen und unserer Wissenschaft nur Glück wünschen zu dem Funde. Dass der Kopf in die Zeit Thutmosis des III gehört, daran kann ja nicht der geringste Zweifel sein. Ich würde ihn mit Ihnen für den König selbst halten, obgleich die Bildniszüge nicht so entschieden herausgearbeitet sind wie bei dem berühmten Stück aus Karnak in Kairo, sondern idealisiert erscheinen. Unmöglich wäre es natürlich bei dieser Art von Bildnissen nicht, dass vielleicht doch Hatshepsut gemeint wäre. Möglicherweise wird man sich über diese Frage immer den Kopf zerbrechen. Dadurch wird aber an dem Wert des ganz ausgezeichneten Stückes nichts geändert. Ich kenne solche Ausgrabungen in der eignen Sammlung recht wohl aus eigener Erfahrung, obgleich in den letzten Jahren keine grossen Überraschungen dabei mehr vorgekommen sind.... Ihre Anfragen haben nun auch bei uns geburtshelferisch gewirkt." He goes on to say that "bei der Überlegung Ihren Thutmosisfalles" he had looked again at a very finely worked little portrait head of a king, uninscribed, of "hard white stone" (calcareous limestone or marble?), No. 2005 in the Berlin Collection, which had been bought "at Sakḳārah" by the Lepsius Expedition in the 'forties, and had generally been regarded as belonging to the Nineteenth Dynasty, as the *Ausführliches Verzeichnis* of 1899 describes it (p. 120), "Königs-Kopf aus feinstem w. Stein, die Arme waren vorgestreckt; die leicht gekrümmte Nase findet sich ähnlich bei Königen der Dyn. 19. h. 10 cm." Professor Schäfer says he had long considered it however to belong to the Eighteenth Dynasty in reality, and on re-considering it now he was greatly struck with the resemblance of its profile to that of the Tuthmosis head at Cairo, so he sends me its photograph (Pl. xv, fig. 1), and bids me publish it, if I wish, as a pendant to my find in the British Museum. This I therefore now proceed to do, with many thanks to my genial colleague.

I think myself that Professor Schäfer is right in his identification of this new portrait as one of Tuthmosis rather than of Hatshepsut, though again the possibility must not be left out of account, that the Berlin head also is of Hatshepsut. I would compare the profile of the Berlin Hatshepsut sphinx, premising of course that the lower part of its nose is a restoration of Lepsius's time and in some ways not a very successful restoration: it should certainly be more rounded at the tip. But the spring of the nose from the face and its



I

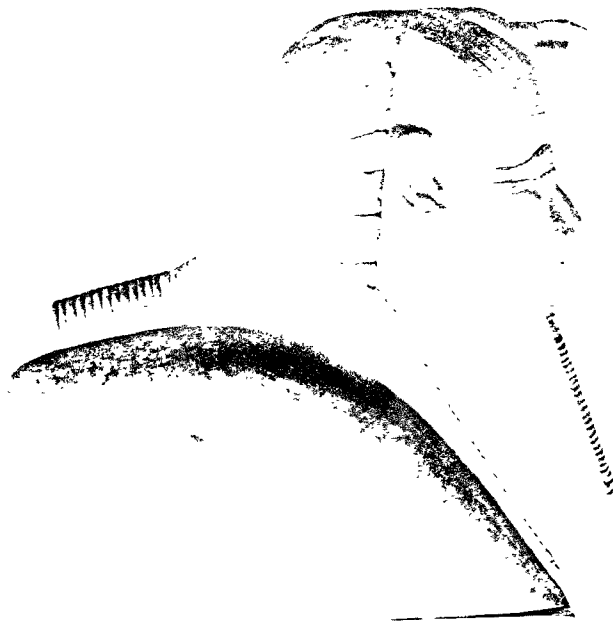
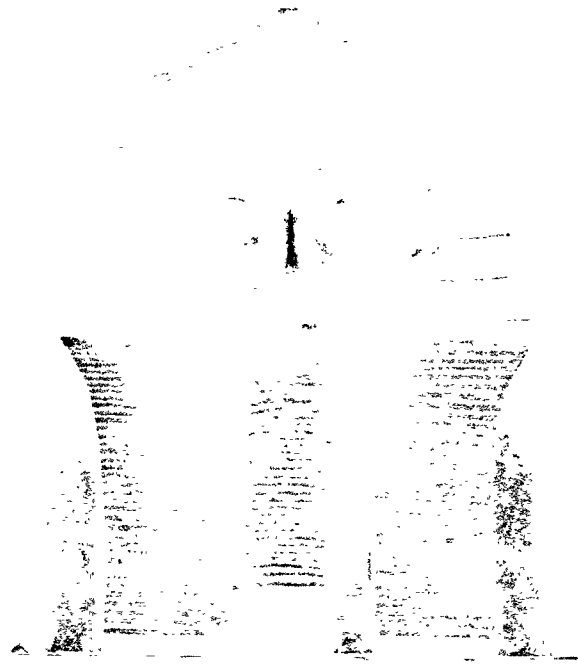


2



3

1. Head of Tuthmosis III (?). Berlin. Actual size.
2, 3. Head of colossal Osirid statue of Hatshepsut from her temple at Dêr el-Bahrî.
(By courtesy of the Metropolitan Museum of Art, New York.)



Hatshepsut Sphinx. Berlin. *Scale* $\frac{1}{10}$.

actual bridge are original¹, and here a great resemblance to the spring and bridge of the Berlin Tuthmosis (?) head is noticeable if the two profiles are compared, while the resemblance to the nose of the Cairo Tuthmosis head is definite². However, as has been said, Tuthmosis and Hatshepsut were very much alike. The Berlin head is less idealized than the London portrait. Like the young Cairo portrait-head, it is naturalistic. The upward tilt of the nose is very individual and is certainly paralleled, though much less decidedly, in the British Museum head No. 986. The king (if it is not the queen!) is represented as older than in the Cairo statue, in which he is obviously a mere boy.

Whether this head is finally to be assigned to Tuthmosis or to Hatshepsut we leave to further argument to decide, if it can. Study of the known portraits of Hatshepsut, which recently have increased in number (specially notable being the colossal limestone head of which happily the most important part, including the nose (Pl. xv, figs. 2, 3), was found by Mr. Winlock at Dêr el-Bahri in 1927)³, may lead us to a definite conclusion in the case of both the London and the Berlin heads before long.

I should add that this, the newest portrait of Hatshepsut, certainly gives more point to the arguments of those who see in the British Museum head No. 986 Hatshepsut rather than Tuthmosis III⁴. Mr. Carter is strongly of this opinion, and if one compares the full-face illustration of Mr. Winlock's head (Pl. xv, figs. 2, 3)³ with the full-face illustration of the British Museum head (*Journal*, XIII, Pl. xxix), the resemblance is certainly striking, more so than the resemblance between the full-face of the British Museum head and that of the Berlin sphinx No. 2299 (Pl. xvi), whose mouth is smaller than that of the British Museum head. Differences in the eyes in all three portraits are merely due to difference of conventional treatment by the sculptors, and mean nothing as to the actual appearance of the queen's eyes. Except perhaps in some of the best work of the 'Amarnah and the Saïte periods (*e.g.* of the latter, the British Museum head of an old man, No. 37883; *Journal*, XIII, Pl. xi, 27 ff.), the eyes are, on account of the overmastering convention, the least reliable of facial traits in Egyptian portraits.

¹ See Schäfer, *Amtl. Berichte aus den Kgl. Kunstsammlungen*, 1910-11, 71. He writes to me: "...die Nase etwa von der Höhe des inneren Augenwinkels abwärts (siehe Vorderansicht) ergänzt ist. Auf der rechten (vom Beschauer aus linken) Nasenseite ist der Nasenflügel bis zur Hälfte erhalten, während er auf der andern Seite ganz zerstört ist. Sonst ist das Gesicht ausgezeichnet erhalten. Der Bart ist bis auf drei Wellen am Ansatz ergänzt, ebenso ist auch der aufgerichtete Leib des Uräus und der untere Teil der Kopftuchlappen modern."

² Prof. Schäfer writes: "ich bin geradezu überrascht von der Ähnlichkeit mit dem Gesicht der berühmten Statue in Kairo, was das Profil angeht."

³ *Bull. Met. Mus. N.Y.* Feb. 1928, ii, fig. 47, p. 47.

⁴ The small portrait-figures found previously by Mr. Winlock (*Bibl. Met. Mus. N.Y.* 1923, ii, figs. 27, 28) are not sufficiently individual to be of much assistance in determining what the queen really looked like; but they confirm generally in the outline of the face the evidence of the new Winlock portrait.

ZWEI INSCRIFTEN DER SPÄTZEIT

VON WILHELM SPIEGELBERG

Mit Tafel xvii.

Eine hieroglyphisch-demotische Weihstele im Museum von Manchester.

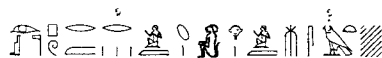
In der aegyptischen Sammlung der Universität Manchester befindet sich etwa seit dem Jahre 1895 als Geschenk des Herrn Robinow¹ die auf Tafel xvii, 2 abgebildete Stele² (no. 8134) aus schwarzem Basalt 40,5 × 28,5 cm.

Unter der geflügelten Sonnenscheibe, die wie die übrigen Darstellungen und Inschriften in versenktem Relief (relief en creux) ausgeführt ist, steht rechts der Stifter des Denkmals mit einem Napf, aus dem die Flamme aufsteigt, die vermutlich Weihrauch verbrennt, vor einem Opfertisch, auf dem ein Gefäß mit einer Pflanze liegt. Der Opfertisch ist für die drei dargestellten und inschriftlich bezeichneten Gottheiten Osiris (𓂠), Isis (𓂡) und Nephthys (𓂢) bestimmt. Unter dieser Darstellung befindet sich eine demotische Zeile, die den Namen des Verstorbenen nennt, dem die Stele geweiht ist:

ḥb Pꜣ-wrm sꜣ Dd-ḥr m'wt=f T'-Ḥr

“der ... (?) Pe-werm, Sohn des Dje-ḥo (Teos), seine Mutter heisst Ta-Ḥor (Tayris).”

In der ersten Gruppe 𓂠𓂡𓂢: *ḥb* muss der Titel stecken, der mir aber sonst nicht begegnet ist. In der auf die demotische folgenden hieroglyphischen Inschrift lauten die Namen:



“der Osiris (= verstorbene) Pwrm, der Selige³, der Sohn des Dd-ḥr (Teos), des Seligen³, geboren von T'-Ḥr (Tayris).”

Der erste Name ist selten und mir aus folgenden Schreibungen bekannt:

- (a) 𓂠𓂡𓂢 Piankhiste, Z. 8, 𓂠𓂡𓂢 ib. 140 (23. Dyn.).
- (b) 𓂠𓂡𓂢 Serapeusstele, *Rec. trav.*, xxii, 15 (22. Dyn.).
- (c) 𓂠𓂡𓂢 Naville, *Tell el Yahudiyeh*, viii⁴ (22. Dyn.).
- (d) Stele Karlsruhe⁵ 𓂠𓂡𓂢 var. 𓂠𓂡𓂢 (22-23. Dyn.).
- (e) 𓂠𓂡𓂢 *Ann. Serv.*, vii, 43 (ohne näheres Datum, wohl “Spätzeit”).

¹ Von ihm 1890 in Aegypten erworben.

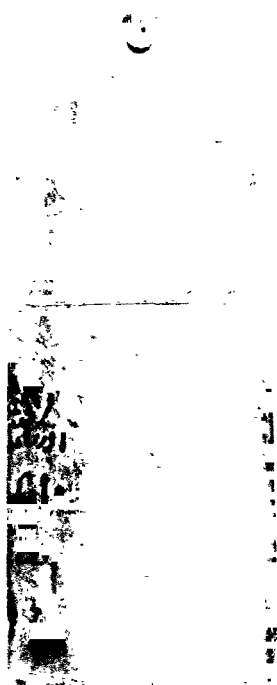
² Ich verdanke die Aufnahmen der Assistentin der aegyptischen Slg. des Museums Miss Crompton, der ich auch sonst für eine Reihe von Mitteilungen zu bestem Dank verpflichtet bin. Die eine der Aufnahmen (links auf der Tafel) gibt den Namen mit Gipsfüllung.

³ 𓂠 statt 𓂡 findet sich auch sonst in Texten der Spätzeit, so in dem im folgenden Aufsatz veröffentlichten Mumienetikett.

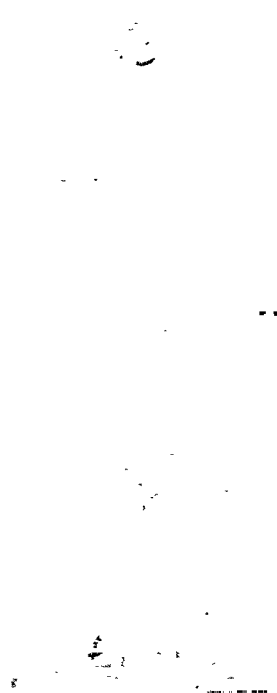
⁴ Siehe dazu *Rec. trav.*, xxiii, 100.

⁵ *Süddeutsche Stelen*, I, no. 32 (Tafel XX).

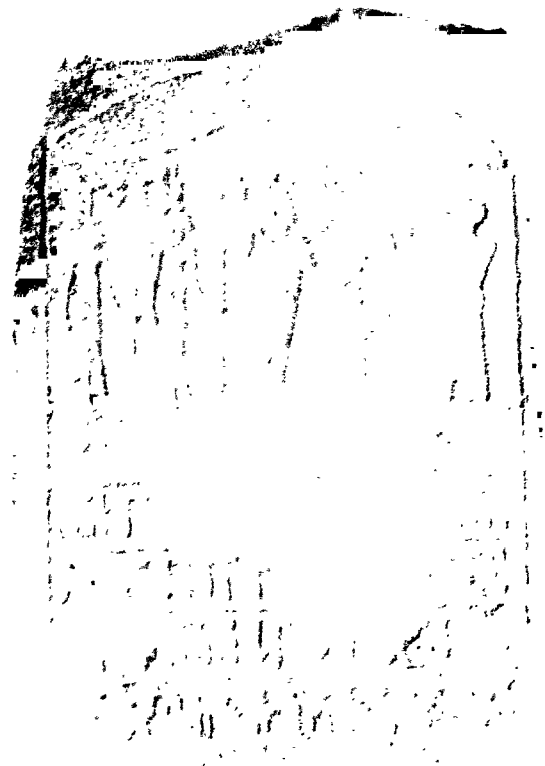
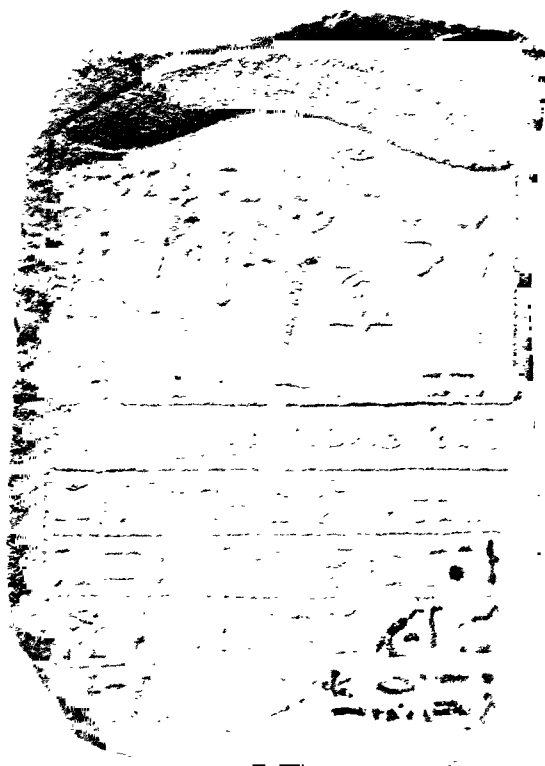
⁶ Im Original steht die Hieroglyphe der Hockerstatue.



1a



1b



- 1a. Vorderseite 1b. Rückseite eines Mumienbildes im Brit. Mus. H. 12.3 cm.
2. Hieroglyphisch-demotische Weihstele im Museum von Manchester (No. 8134). H. 40 cm.

Auch demotisch ist der Name nicht selten:

(f) $\downarrow 3/\text{sw}$ var. $\downarrow 3/\text{sw}$ ($\text{X} \text{E} \text{f} \text{w} \text{A} \text{f}$) Ostraka aus Saft el-Henne im Museum von Manchester = Petrie, *Hyksos and Israelite Cities*, double vol., pls. xxxix and xxxix A¹ (frühptol.).

(g) $\downarrow 5/\text{sw}$ Pap. dem. Strassburg, 49 (ptol.).

(h) $\downarrow 3/\text{sw}$; $\downarrow 3/\text{sw}$ ($\text{X} \text{E} \text{f} \text{w} \text{A} \text{f}$) *Pz-wlm*, Pap. dem. Berlin, 3114 = 3140 (Verso) (ptol.).

Aus allen diesen Schreibungen, zu denen noch die unserer Stele tritt, geht mit Sicherheit hervor, dass der Namen aus dem männlichen Artikel *pz* vor einem Substantiv *wrm*, *wlm* besteht. Dieses ist im Demotischen mit f determiniert, woraus man auf eine Bedeutung "Kind, Knabe, Diener" aber auch auf "gross²" schliessen könnte. Das Wort sieht unaegyptisch aus, und ich möchte es als libysch ansprechen, wozu es stimmen würde, dass das n. pr. zuerst in der Spätzeit (ab 21–22. Dynastie) erscheint³. Seltsam ist die hierogl. Schreibung unseres Textes. Sollte $\text{sw} = \text{sw}$ sein und ein abusives Determinativ zu *rmj*, "weinen" ($\text{sw} = \text{sw}$)?

Die hieroglyphische Inschrift lautet:

- 1 $\text{f} \text{A} \text{sw} \text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f}$
- 2 $\text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f}$
- 3 $\text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f}$
- 4 $\text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f} \text{w} \text{A} \text{f}$ ⁴

"Der König sei gnädig und gebe (ein Opfer) an Osiris, den Ersten des Westens, den grossen Gott, den Herrn von Abydos, Ptah-Sokar-Osiris, den grossen Gott, in dem Heiligtum stz , und an Isis, die Grosse, die Gottes-Mutter, und an Nephthys, die Gottes-Schwestern—Gebt Schutz dem Osiris *P-wrm*, dem Verstorbenen, dem Sohne des Dd-Hr (Teos), geboren von T'-Hr (Tayris)."

Aus dem Text wie der Darstellung ergibt sich, dass die Stele kein Grabstein sondern eine Weihstele ist, welche den Schutz der dargestellten Götter⁵ für den Dedikator *P-wrm* (Pewerme) erbitten soll.

Ein Mumienschild mit Vignette.

Die Kenntniss des hier (Tafel xvii, 1) abgebildeten Mumienetiketts verdanke ich Alan H. Gardiner, der es im September 1928 dem Britischen Museum schenkte. Es ist auf beiden Seiten beschrieben und ist durch die Vignette am Kopf so einzigartig, dass es eine Veröffentlichung verdient, die ich mit der freundlichen Erlaubnis von Dr. Hall gern über-

¹ Nach eigener Abschrift vom Original.

² wie in *tu*, *sw*.

³ Der Name steckt vielleicht auch in keilschriftl. *Puayamu* (*Zeitschr. Assyriol.*, xv, 396).

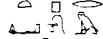
⁴ oder etwa $\text{sw} \text{f}$.

⁵ Da nach der Darstellung nur drei Götter angerufen sind, so wird man Osiris + Ptah-Sokar-Osiris der Inschrift als eine Gottheit = Osiris zu fassen haben.

Als Stammbaum ergibt sich

Espmête I
|
Psentaê
|
Imhotep
|
Espmête II

NACHTRAG.

Für die Erklärung des n. pr. *Pwrm* ist der weibliche theophore Name  (Daressy, *Statues de divinités* im *Catalogue général*, no. 38428) von Bedeutung, da er lehrt, dass *Pwrm* ein Gottesname war.

THE SHEPHERD'S CROOK AND THE SO-CALLED "FLAIL" OR "SCOURGE" OF OSIRIS

BY PERCY E. NEWBERRY

With Plates xviii and xix.

It is generally agreed that Andety, the primitive god of Dedu-Busiris, was the prototype of Osiris, and that it was from him that the Egyptian god of the Dead acquired the symbols of royalty, the ? and the \wedge , by which Osiris's images were distinguished in later times. These two symbols are usually called the "crook" and the "flail," or the "crook" and the "scourge." That the ? is the shepherd's crook, the Pastoral Staff of Christian times, is, of course, obvious; but if the \wedge be carefully examined it will be seen that it was so constructed that it could only with difficulty be used as a whip, and the correctness of the designation "flail" or "scourge," both of which instruments are primarily employed for *beating*, must be questioned. It is of these two symbols of sovereignty that I propose to speak in the present paper¹.

I. The "Shepherd's Crook" ? .

The ? -sceptre which Osiris holds in his right hand is the shepherd's crook. In the earliest figures of it the curve of the crook is slight and does not turn downwards, but later examples generally show a much greater curve which turns downwards and then outwards² (see Figs. 1 and 2). Many specimens of this crook have been found in tombs of the Middle Kingdom and later periods³. They range in size from one to three feet in length: they are usually made of wood and are sometimes covered with gold leaf or thin metal plating. In detailed hieroglyphs the ? -sign is coloured yellow with black bands, the latter representing rings of copper or bronze for strengthening the staff. A specimen of this kind of sceptre was kept in the temple at Heliopolis⁴. It was a sacred object, and a special priest had charge of it.

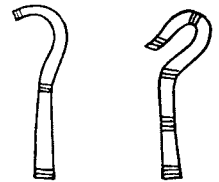


Fig. 1.


Fig. 2.

¹ This paper was read before the African Section of the International Oriental Congress held at Oxford in August 1928. I had originally announced my identification of the \wedge some eighteen years ago in a letter dated 8 December 1910, to Sir James Frazer (see his *Golden Bough*³, Part IV, *Adonis, Attis, Osiris*, London, 1914, II, 109, n. 1), but I delayed publishing full details until I had obtained a specimen of a modern *laduisterion* from either Crete or Cyprus. Thanks to Dr. Hall and the Keeper of the Candia Museum I succeeded in acquiring a specimen last year.

² Early examples, Petrie, *Medam*, x; Murray, *Saqqara Mastabas*, I, xxxix, 6; Middle Kingdom example, Lacau, *Sarcophages*, Pl. xlv; later example, Griffith, *Hieroglyphs*, Pl. iii, 39.

³ Mace-Winlock, *The Tomb of Senebtisi*, 85.

⁴ Brugsch, *Dict. géogr.*, 153 and 190.

This crooked staff is generally figured in the hand of the reigning Pharaoh¹; sometimes the Viceroys of Nubia are represented with it²; occasionally, though very rarely, a Vizier held it³. One example of the form with slightly curved crook is shown in the hand of the Aamu sheikh depicted in the scene of a party of Semites arriving in Egypt under Senusret I at Beni Hasan⁴. Here the sheikh leads his people, and by his side is a tame Sinaitic ibex. The crook, called *ḥḳꜣ.t*, is, in hieroglyphic writing⁵, very commonly employed as a word-sign for "sheikh" or "ruler" or "prince," and it is not difficult to see how it came to have this meaning. Among pastoral peoples it is the sheikh who leads the flocks to the best pastures; he is the chief shepherd, and the crook that he carried became the outward and visible sign of his authority. Among the Hebrews it was the emblem of royalty⁶. The Syrian shepherd still invariably carries a staff or rod with him when he goes to feed his flock⁷. It is often bent or crooked at one end. With this staff he rules and guides his animals to their green pastures and defends them from their enemies. With it also he corrects them when disobedient, and brings them back when wandering. Similar crooked sticks are still employed by the pastoral people of the Sinaitic, Eastern and Nubian Deserts. Lord Lindsay⁸ mentions having seen Bedâwîn in the neighbourhood of Sinai carrying short crook-headed sticks like "those represented in the hands of Osiris in the Egyptian sculptures." In the Eastern⁹ and Nubian Deserts⁹ the 'Ababda carry sticks similar to the one figured in the hand of the Aamu sheikh figured at Beni Hasan; they are primarily used for killing snakes and scorpions, for a straight stick is of little avail for striking a reptile upon the ground. These sticks are called *selame* by the Arabs, and they are made from the branches of the *sellam*-tree (*Acacia tortilis*) which grows in many of the wâdis of the Eastern and Nubian Deserts. Burckhardt¹⁰ says that they are made from the branches "about the thickness of the thumb and three feet in length, the top of which is bent in the fire while the wood is yet green"; they are then frequently rubbed with grease, and acquire great weight and strength. At Suakin and generally in the Red Sea Province of the Sudan every man carries such a stick. Sometimes a crooked stick with much longer handle is represented in the hand of the Egyptian kings¹¹; this longer stick was called  *ꜥw.t*, and in hieroglyphic writing it is often used as a word-sign for "goats and sheep," and also for "flocks." At the present day the 'Ababda, Bishârîn, and 'Amara use the long shepherd's crook (which they call *maharakht*) for pulling down the upper branches of the acacias and other trees that their goats and sheep may browse on the leaves; these crooks are said to be sometimes well over 20 feet long¹², but I have not seen an example more than seven feet in length.

¹ *E.g.* the statues of Amenophis IV in the Louvre, and of Ramesses II at Turin.

² Davies-Gardiner, *Tomb of Hay*, Pl. xix.

³ *E.g.* the Vizier of Seti I, see Wilkinson, *Manners and Customs of the Ancient Egyptians* (ed. Birch), III, 371. This scene is from Paser's tomb at Thebes (No. 106).

⁴ Newberry, *Beni Hasan I*, Pl. xxviii.

⁵ Griffith, *Hieroglyphs*, 57.

⁶ *Genesis* xlix. 10; *Numbers* xxi. 8; *Ezek.* xix. 11, 14; in Assyrian *reṣu* means both "shepherd" and "ruler."

⁷ Thomson, *The Land and the Book*, I, 304.

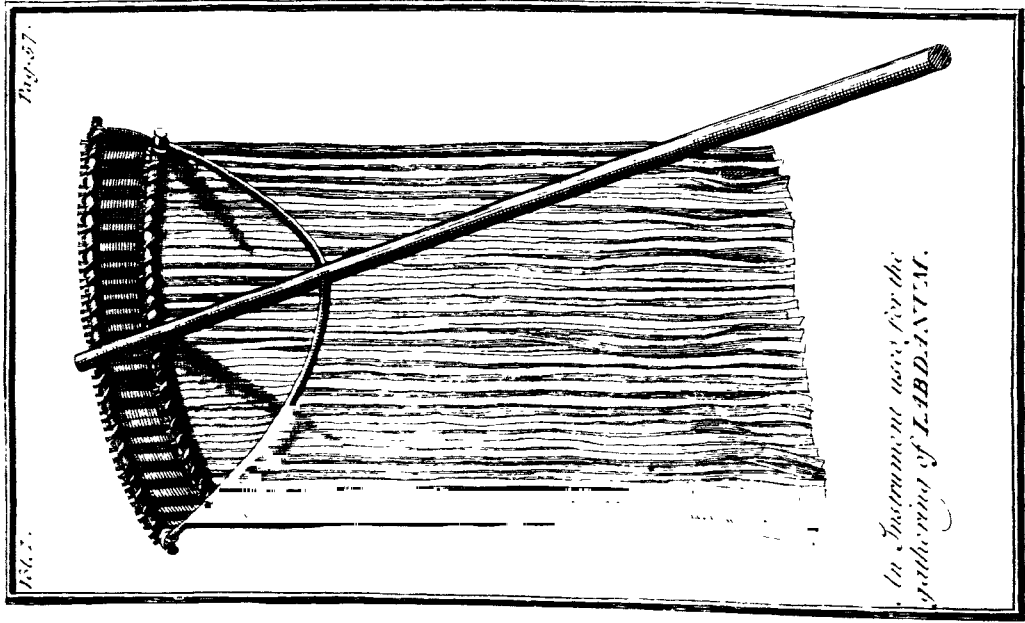
⁸ *Letters on Egypt, Edom, and the Holy Land*, London, 1866, 164.

⁹ From my own observation.

¹⁰ Burckhardt, *Travels in Nubia*, London, 1819, 186.

¹¹ F. von Bissing, *Das Re-heiligtum des Königs Ne-woser-re*, II, Titelblatt.

¹² C. W. Murray, *Journ. Royal Anthropol. Inst.*, LIII, 421.








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1 Instrument used in Crete A.D. 1700 for gathering ladanum (after Tournefort).
2. So-called flail from Mör. Berlin Museum. *Scale c. 1.*

officials and priests¹. From the Middle Kingdom actual specimens have been preserved. One from Lisht² (see Fig. 3) shows that it consisted of a straight handle with a triangular piece at the top; this triangular piece is fitted on to the handle, and from it are suspended three strings of truncated cones, cylindrical beads and drop-shaped pendants. The triangular piece at the top shows very clearly that the instrument could not have been used as a whip for beating. But the Lisht specimen obviously represents a conventionalised form of the instrument; simpler forms are depicted on the monuments, and some ancient examples have actually been found. On a clay-sealing of King Zer (First Dynasty) the monarch is shown holding a *nhj* which consists of a stick from the upper end of which hang three straps³. In the Mortuary Temple of Sahure⁴ a specimen is figured without the truncated cones or cylindrical beads. In the Berlin Museum there is an example from Mēr⁵, dating from the Middle Kingdom, Pl. xviii, fig. 2; the handle is of wood and the pendant-pieces are of linen. A model from Thebes⁶ (Fig. 4), dating from the New Kingdom, has three pendant-pieces joined together; the top piece is hollowed out on the underside and loosely joined to the handle by means of a wooden peg. This model clearly shows that the pendant-piece must have been intended to revolve around the handle, consequently the instrument could not have been used as a flail or scourge for beating. If, therefore, it was not a whip or flail, what can its purpose have been?




In his right hand Osiris holds the shepherd's crook; it is probable, therefore, that the instrument which he holds in his left hand is connected with the shepherd also. There is much evidence to show that the goatherd in the Near East, besides attending to his flock, also employed himself in gathering, by means of an instrument similar to the Egyptian *nhj*, a precious substance⁷ which was, and indeed still is, used in the pre-

¹ It was borne by the  (Borchardt, *Ne-roser-ref*, 85); the -priest (Bissing, *Ne-roser-ref*, II, Pl. 20; Naville, *Festival Hall*, Pl. xxiii); the  (Bissing, *op. cit.*, Pl. 9); the  (Bissing, *op. cit.*, Pls. 16 and 20; Naville, *op. cit.*, Pls. i, xix, etc.); and the  (Naville, *op. cit.*, Pl. xxvii; Petrie, *Memphis II*, Pls. v, vii). An instrument of a slightly different form, but which is possibly a kind of *nhj*, appears in the hands of some women in the Middle Kingdom tomb of Antefoker at Thebes (Davies-Gardiner, *Tomb of Antefoker*, Pl. iii).

² Mace-Winlock, *Senebtesi*, Pl. xxx. Very fine examples of the instrument have been found in the tomb of Tutankhamūn, see Carter, *The Tomb of Tutankhamen*, II, Pls. lxxv-lxxi.

³ Petrie, *Royal Tombs*, II, Pl. xv, 108.

⁴ Borchardt, *Sahure* II, Pl. 47.

⁵ Berlin, No. 20320: Dr. A. Scharff informs me that this specimen was bought from Said Bey Khashaba; it is, therefore, probably the one referred to by Ahmed Bey Kamāl in *Ann. Serv.*, XII, 113 as having been found in the tomb of the  . It is described as "un sceptre *nekhekh* avec manche en bois et trois franges en toile. Le manche, qui mesure 0 m. 33 cent. de long, a la forme , et trois franges qui en pendent ont 0 m. 27 cent. de long."

⁶ This example was bought at Thebes and came from the necropolis there: it probably dates from the Eighteenth Dynasty. I have given it to the British Museum (No. 58938).

⁷ Herodotus, III, 112, says that it was used for making perfumes. Pliny (*H.N.*, XIII, 2) notes that it was one of the ingredients of the "regal" unguent made for the kings of the Parthians. P. della Valle (*De' Viaggi*, Rome, 1663, parte terza, 449) records that in Italy it was "mixed with other substances to make an excellent perfume." At the present day it is still used: E. J. Parry (*Cyclopaedia of Perfumery*, London, 1925, 369) says that it is "an exceedingly valuable raw material for the perfumer" and "has in recent years become very much esteemed as a perfume material in Western Europe and America." In Pliny's time the best quality sold at the rate of 40 asses per pound (*H.N.*, XII, 37). Landerer (*Pharm. Journal*, x, 1851, 349) says that in 1850 it was worth about 15 to 20 piastres a pound. Bentley and Trimen, *Medicinal Plants*, 1875, t. 24, note that some 6000 lbs. of *ladanum* were annually exported from

paration of unguents and incenses¹, and was believed to possess great medicinal and aphrodisiac properties². This substance, known as *ladanum*³, is an excretion from the

Crete and some 2800 lbs. from Cyprus. The same authors remark that it was also collected in Spain and Portugal. The specimens of Cypriote ladanum that I have been able to secure contain more than 50 % of fine sand: this may account for the fact that ladanum is now rarely exported from the island. According to H. L. Thompson, Commissioner at Papho in 1885, the annual amount collected in Cyprus did not then exceed 80 lbs., the price varying from 1s. 6d. to 2s. 6d. per oke of 2½ lbs. (E. M. Holmes, *The Perfumery and Essential Oil Record*, June, 1911, 133). It may still be bought in the bazaars of Cairo, where it is sometimes used for chewing to sweeten the breath (Lane, *Modern Egyptians*⁵, 1860, 187).

¹ As an incense ladanum was employed either alone or mixed with other sweet-smelling substances. Herodotus, III, 112, says that "there is nothing that the Arabians burn so often for fragrance." Plutarch (*On the Pythian Responses*, vi) mentions ladanum, frankincense, and cassia as being burnt on the altars. Abu Šālih (ed. B. T. Evetts, Oxford, 1895, 286) writing in the twelfth century A.D. says that "if any of the Abyssinians commits a sin, he takes a handful of incense of the kind which is burnt in the sanctuary; it is composed of frankincense, sandarach, styrax, ladanum, mastic, aloes and cassia; then he confesses his sin over this mixture, and throws it into the censer, together with dried rose-leaves." I have noticed that in Cairo and in other large towns of Egypt, as well as in Smyrna, Constantinople, Tunis and Algiers, the native bazaars literally reek with the scent of this powerful incense. Ladanum is the chief ingredient of the fumigating pastilles known as "pastilles du Sérail" which produce a languorous odour recalling the heavy type of Oriental perfume. It is occasionally used by the Bishārin, Amāra and Hadendoa peoples, but the merchants at Halaib, Dongonab, and Sinkat had none in stock, though they said they knew it well, when I visited those places in January 1928. In the Accounts of Geoffroi de Fleuri, Master of the Wardrobe to Philippe le Long, King of France, there is a record of the purchase of "laudanon encenz" for the funeral of John, posthumous son of Louis X, A.D. 1316 (Douet d'Arcq, *Comptes de l'Argenterie des rois de France*, 1851, 19).

² Ladanum possesses stimulant and expectorant properties. In medicine it was used either inwardly or outwardly (Dioscorides, *De materia medica*, I, 128). Pliny (*H.N.*, xxvi, 30) mentions that it was employed for "many disorders." It is specified in Oribasius, *De circ. simpl.* I, ii, fourth century A.D. C. van Bruyn (*Voyages*, Paris, 1714, 380) notes that it was believed to be of great service in time of plague (see also J. Heyman, *Travels*, London, 1759, II, 290). Pococke (*Description of the East*, London, 1743, III, ch. XI) says, "the smoke is good for the eyes, but it is most used against the infection of the plague by carrying it in the hand and smelling it." In Turkey it was the common practice of the people to have a piece of ladanum affixed to their walking sticks, or to wear a piece as an amulet (Bentley and Trimen, *Medicinal Plants*, t. 24). Landerer (*Pharm. Journal*, x, 1851, 349) notes that it was most used in the Near East for fumigation and that the infusion of it was employed in tea against colds and rheumatic affections. Saville (*Cyprus*, London, 1878, 95) says that it was chiefly used medicinally as a mild stimulant in external applications. It was "official" in the catalogues of simples in the London *Pharmacopoeias* of 1627 to 1809 for catarrhal affections, dysentery etc., but was subsequently deleted and its use in such cases is now obsolete. It was "official" in the Spanish *Pharmacopoeia* of 1822 and is still retained in that of 1905. It is sometimes used in the Near East for the same purposes as ambergris (*Nouveau Larousse illustré*, s.v. ladanum).

³ The word *ladanum*, like most other names for incenses, appears to be of Semitic origin. It is found in the Assyrian *la-da-nu* (*Annals of Tiglath-Pileser*, IV, 745, 727, l. 85); in the Hebrew לָדָן *loth* (*Genesis* xxxvii. 25; xlii. 11). "The Arabians call it ladanon," says Herodotus (III, 112): *ladan* is found in inscriptions on two square-shaped censers from Thou in Southern Arabia (Mordtmann and Muller, *Sabäische Denkmäler*, Vienna, 1883, 81-84). *Ladin* occurs in Abu Šālih (ed. Evetts, 236). In Turkish it is called *laden*, in Persian, *rebehtah*. In Greek the *Cistus* shrub is called *κισθος*, *κισθαρον*, *κισσαρον* and Dioscorides (I, 128, cf. Galen, 13, 191) distinguishes it from the *ληδον* (but cf. Pliny, *H.N.*, xxvi, 30): the gum resin is *ληδανον* or *λάδανον* (Herodotus, III, 107 and 112; Dioscorides, I, 126, 128). Liddell and Scott, *Lexicon*, translate wrongly "gum-mastic," and so does Godley in his edition of Herodotus in the Loeb Classical Library, II, 135, 139. In Latin the plant is *lāda* (Pliny, *H.N.*, xxvi, 8, 30, § 47; cf. XII, 43), or *leda* (*idem*, XII, 37); the gum-resin *lādānum* or *līdānum* (*idem*, XII, 37; xxvi, 30). In English the name *ladani* first appears in Lanfranc, *Cirug.* (circa 1400 A.D.), 179. In Arnold's *Chronicle*, 1502, ed. 1811, 234,

short glandular hairs¹ that cover the viscid leaves of various species of *Cistus*. This genus of plants numbers some sixteen species², which are spread throughout the Mediterranean region. Five³ are ladanum-bearing and these are commonly known as "gum-cistuses." They are shrubs from one to five or more feet in height, and their leaves and young shoots in warm weather exude a sweet glutinous substance which has a very strong balsamic odour; so strong, indeed, is the scent, that a single bush will perfume the air to a great distance⁴. The plants thrive best in hilly districts and no spot can be too dry or shadeless for them. In many parts of the Mediterranean region they grow in great profusion. In Palestine they are especially plentiful on Mount Carmel⁵, and they grow everywhere in the hilly districts east and west of the Jordan⁶. Post⁷ says that they are found throughout the shrubby hillsides of Palestine, and Col. Meinertzhagen tells me that gum-cistuses grow on Kent Hill two miles east of Gaza and as far south as Rafia. There is reason to believe, as I hope to show in a later paper, that in Pharaonic times gum-cistuses grew as far west as Mount Casios and perhaps over the greater part of Northern Sinai. These plants grow in great profusion in many parts of Asia Minor⁸, in Cyprus⁹, Crete¹⁰, on the Greek Mainland¹¹, and in many of the Greek Islands¹². In Corsica they were so abundant that Napoleon used to say that he would know his own native land with his eyes shut, from the scent of these plants. Gum-cistuses are also found on the High Plateau of the Algerian Sahara¹³, and Sir Joseph Hooker¹⁴, writing of the vegetation of the slopes of the Gebel Kebir near Tangier, says that "the most conspicuous of all the plants there is the gum-cistus (*Cistus ladaniferus* L.), which in the Sierra Morena and the adjoining parts of Spain and Portugal obtains such predominance that for twenty miles together one may ride through a continuous thicket where the peculiar scent of the gum that covers the leaves and young branches is never absent."

lapdanum occurs in a list of spices. In Gerarde's *Herbal*, ed. 1597, 1102, ladanum is employed with the remark that "apothecaries corruptly call it lapdanum" (1299). Heyman (*op. Cobham, Ercerpta Cypria*, Cambridge, 1908, 248) says, "some Franks call it laudanum, others give it the name of Strax." In Spanish ladanum is called xara: the Italians and Portuguese name it ladano. Gerarde (*Herbal*, 1597, 1107) says "the Mauritanians call the juice or clammy matter, Ledon and Laden." For the ancient Egyptian name of this fragrant gum-resin see below, p. 94.

¹ F. Unger and T. Kotschy, *Die Insel Cypern*, 1865, 403, give drawings of the glandular structure of the hairs.

² The standard monograph on the *Cistaceae* is that of W. Grosser in Engler's *Das Pflanzenreich*, Leipzig, 1903, iv fasc. For coloured drawings of many species see R. Sweet, *Cistineae*, London, 1825-39. For the geographical distribution of these plants in the Near East see Boissier, *Flora Orientalis*, i, 436-9. Sir Oscar Warburg tells me that he is at present engaged on a new monograph of the *Cistaceae*.

³ The five gum-cistuses are (1) *Cistus ladaniferus* L., (2) *C. laurifolius* L., (3) *C. monspeliensis* L., (4) *C. salicifolius* L., (5) *C. villosus* L. I have grown all these species in my English garden, but they require a sheltered position.

⁴ Even in England these shrubs are wonderfully fragrant. I had an old plant of *C. ladaniferus* that on a warm day in summer would scent the whole house though it was growing more than fifty yards away.

⁵ Tristram, *Fauna and Flora of Palestine*, 235; *Natural History of the Bible*, 458.

⁶ Tristram, *Fauna and Flora of Palestine*, 235.

⁷ Post, *Flora of Syria and Palestine*, 114.

⁸ W. I. Hamilton, *Researches in Asia Minor*, London, 1842, 99, 105, etc.

⁹ J. Holmboe, *Studies on the Vegetation of Cyprus*, Bergen, 1914, 130.

¹⁰ Tournefort, *Voyage into the Levant*, London, 1718, i, 56.

¹¹ Sibthorp, *Flora Graeca*, tab. 493-5.

¹² Thevenot, *Travels in the Levant*, London, 1687, Pt. 1, 104.

¹³ Tristram, *The Great Sahara*, London, 1860, 414.

¹⁴ J. D. Hooker and J. Ball, *Morocco and the Great Atlas*, London, 1878, 18.

Ladanum was an important article of commerce in ancient times. Under the name *loth*¹ it is mentioned as having been taken down to Egypt by the travelling company of Ishmaelites from Gilead, and Israel² sent it with other sweet-smelling substances to Joseph in Egypt. Under the name *la-da-nu* it is referred to in the Annals of Tiglath-Pileser³ who received it from Rezon of Damascus. Herodotus⁴ says that Arabia was the only country in which ladanum was produced. Pliny⁵ remarks that it came from Cyprus as well as from Arabia, and that in the latter country it was "collected by the Nabatheans who border upon Syria." He also says⁶ that the shrub which produced ladanum was originally found growing in Carmania and was "propagated by plants by order of the Ptolemies in the parts beyond Egypt." Dioscorides⁷ refers to Arabian, Cypriote and Libyan ladanum. In the Middle Ages and in modern times it has been imported into Western Europe mainly from Crete and Cyprus⁸; these two islands exported in the seventies of last century nearly 10,000 lbs. weight of it. There are also records of its being collected in Greece⁹, in several of the Greek Islands¹⁰, in Asia Minor¹¹, as well as in Palestine¹², Spain and Portugal¹³.

The instrument employed by the shepherds for collecting the fragrant gum-resin consists of a stick with straps of goatskin attached to one end; it is not used as a whip to beat the bushes with, but is gently shaken or trailed over them in order to gather the sticky exudation of the leaves and young shoots. In 1683 C. van Bruyn¹⁴ saw such an instrument being used in Cyprus; it was a short stick with several little cords tied to it, and it was rubbed over the cistus plants as long as any gum remained upon them. G. Mariti¹⁵, who was in Cyprus in 1760, says that while the goats were grazing among

¹ *Genesis* xxxvii. 25.

² *Genesis* xliii. 11; cf. Tristram, *Natural History of the Bible*, 458.

³ *Annals of Tiglath-Pileser*, iv, 745, 727. l. 85. Schrader, *Die Keilinschriften u. d. Alte Testament*, 151, 18. I owe this reference to my friend Prof. Langdon. Cf. also Schrader, *Monatsberichte der Königl. Akad. der Wissenschaften*, 1881, No. 5, 405.

⁴ iii, 107.

⁵ *H.N.*, xii, 37. Cf. xxxvii, 77, where he mentions ladanum as a valuable substance gathered from the hair of she-goats of Arabia. (From the Bamberg MS.)

⁶ *Idem.* In xii, 31, Pliny remarks that "the trees which bear frankincense grew in Carmania and Egypt where they were introduced and planted under the auspices of the Ptolemies when reigning there."

⁷ *De materia medica*, i, 97.

⁸ Hakluyt, *The Principal Navigations, etc.*, vi, 27 (Glasgow, ed. 1904). There are two forms of Cypriote ladanum: (1) sticks or *ladanum in baculis*, and (2) irregular masses or *ladanum in massis*. The best from Crete is moulded into contorted or spiral pieces and is known as *ladanum in tortis*. Specimens of all these forms may be seen in the Museum of the Royal Gardens at Kew.

⁹ Notwithstanding Landerer's remark in the *Pharm. Journal*, x (1851), 349, that "although the leaves become glutinous in Greece they do not yield any exudation that can be gathered," Sibthorpe (in Walpole's *Travels*, London, 1829, 23) records that in his time ladanum was collected in Greece as well as in the islands of the Greek Archipelago.

¹⁰ For its collection in Naxos, see below, p. 92.

¹¹ I learnt this when at Smyrna in 1905.

¹² Tristram, *Fauna and Flora of Palestine*, 235.

¹³ J. T. Dillon refers to Spanish ladanum in his *Travels through Spain*, London, 1782, 127; cf. Bentley and Trimen, *Medicinal Plants*, t. 28. There is a specimen of Spanish ladanum in the Museum of the Royal Gardens, Kew. According to E. M. Holmes, in *The Perfumery and Essential Oil Record*, 1911, 133, Spanish ladanum is practically unknown in European commerce.

¹⁴ *Voyages*, Paris, 1714, 380.

¹⁵ *Travels in the Island of Cyprus*, transl. by C. D. Cobham, Cambridge, 1909, 117.

the cistus bushes, the goatherds themselves were engaged in collecting ladanum "with a short stick at the end of which were fastened strips of goatskin, by trailing them over the plants." That this method of collecting ladanum was an ancient one we learn from Pliny, for he describes¹ an elaborate instrument that was used for the purpose, and it is obvious that it must have been derived from a simpler form like that which is mentioned by C. van Bruyn and G. Mariti. This is Pliny's description of the instrument:—"At the present day," he says, "ladanum is prepared in Syria and Africa also, being known as *toxicum* from the circumstance that in gathering it, they pass over the plant a bow with string stretched, and covered with wool, to which the dew-like flocks of ladanum adhere." An instrument of this highly developed form is still in use in Crete and Cyprus. Many travellers of the sixteenth, seventeenth and eighteenth centuries have described it. Pierre Belon du Mans², who visited Cyprus in 1552, says that the Greeks living there "for the preparing of ladanum provide a peculiar instrument which in their vulgar tongue they term *Ergasteri*. It is like a rake without teeth, to this are fastened sundry thongs cut out of raw and untanned hide; they gently rub these over the ladanum-bearing bushes, so that the liquid moisture concrete about the leaves may stick to them, which they afterwards with knives shear off these thongs in the heat of the day." Belon goes on to say that "it is nowhere in the whole island of Candy gathered in greater plenty than at the foot of Mount Ida at a village called Cogualine, and at Milopotamus." A very interesting account of ladanum gathering in Crete is given by Tournefort³ who visited the island in 1700. Towards the end of July he was at Retimo and from there he went on to Melidoni some twenty miles distant to see the gum collected. Near the sea he found himself "among those dry sandy hillocks overspread with the little shrubs that yield ladanum. It was in the heat of day and not a breath of wind was stirring; circumstances necessary to the gathering of ladanum. Seven or eight country fellows in their shirts and drawers were brushing the plants with their whips, the straps whereof, by rubbing against the leaves of this shrub, licked up a sort of odoriferous glue sticking to the leaves; 'tis part of the nutritious juice of the plant, which sweats through the texture of the leaves like a fatty dew, in shining drops as clear as turpentine." The instrument that was being used was a "sort of whip with long handle, with two rows of straps as you see it represented in the figure" (see Pl. xviii, fig. 1). He goes on to say that when the straps were sufficiently laden with the grease, the collectors took a knife and scraped it clean off the straps, and made it into a mass or cakes of different sizes. A man that was active could gather as much as two pounds three ounces a day, and this could be sold for a crown on the spot. It is remarkable that the separate straps do not adhere together when they are fully charged with the

¹ *H.N.*, xxvi, 30. Two modern instruments, one from Crete, the other from Cyprus, were obtained for the Museum at Kew by Sandwith in 1883. They have been described by Sir W. Thielton-Dyer in the *Pharm. Journ.*, xv (1884), 301; and the specimen from Crete is figured by Sawyer, *Odorographia*, 2nd series, 1894, 304. The length of the handle of one is 45 inches, width of bow 25 inches, and length of the leather thongs 36 to 39 inches. Landerer (*Pharm. Journal*, x (1851), 349-50) calls the instrument a "lambdanisterion" and says that it was "a wooden instrument resembling a rake with leather straps instead of teeth, and three semi-circular zinc supports." Pococke (*Description of the East*, Book III, ch. xi) figures an example which he says was called "staveros" and resembled a cross-bow. In a letter from Mr. Menelaos Markides of the Cyprus Museum to Professor J. L. Myres, in answer to a query that I had put to the latter, the instrument is said to have been called in Cyprus *ληνίστρα*.

² *Les observations de plusieurs singularités, etc.*, Paris, 1555, ch. vii, 8 verso.

³ *Voyage into the Levant*, London, 1718, I, 56 sq. See also C. S. Sonnini, *Voyage en Grèce et en Turquie*, Paris, 1801, 424-6.

resin but become cylindrical and rope-like¹, precisely like the lower ends of the so-called "flail" from Lisht. Through the kindness of Dr. Hall and the Keeper of the Museum at Knossos, I obtained from Crete last year three thongs of goatskin charged with ladanum; these I have photographed (Pl. xix). I may note that the ladanum becomes brittle on being kept for any length of time, and that the fully charged straps crack across their breadth; this circumstance doubtless explains the truncated cones seen half way up the pendant-pieces of the ancient Egyptian instrument.

The sweetly-scented substance was also collected in another way. Herodotus² and some later writers³ refer to it being found sticking to the beards of goats. Writing of the Arabian ladanum, Pliny⁴ says that "many writers have stated that it is the result of an accidental injury inflicted upon a certain odoriferous plant, under the following circumstances; the goat, they say, which is in general an animal that is extremely injurious to foliage, is particularly fond of shrubs that are odoriferous....Hence it is that the animal crops the sprouting shoots and branches which are swollen with a liquid juice of remarkable sweetness; these juices drop and become mingled together, and are then wiped up by the shaggy hairs of its unlucky beard. Being there mingled with the dust, these juices form knots and tufts [: the beards are then cut off⁵] and dried in the sun; hence the circumstance is accounted for that in ladanum we find goats' hairs." The same author tells us that Cypriote ladanum was gathered in the same way and that it was sometimes taken from off the hair of the animal by means of a comb. C. van Bruyn⁶ who visited Cyprus in 1683, states that in his time it was "near Lefcara at the foot of Mt. Olympus that the famous ladanum was collected." "To gather it," he says, "the peasants drive their goats to the fields before sunrise that they may browse on the *Cistus* bushes, and as ladanum is soft and sticky it adheres to their beards which are cut once a year, and the gum is extracted from them by the use of fire." Thevenot⁷ was in the island of Naxos in 1681, and there learnt the following facts about the collection of the fragrant gum from the goats. "In the island," he says, "are many goatherds that keep goats and the hills are full of a herb which Mathiolus calls *Ledum* and the modern Greeks *kissaros*⁸; when the goats feed on that herb, a certain viscuous dew that is upon it sticks to their beards and there congeals into a kind of gum, of very good smell, which they call ladanum and vulgarly laudanum, and cannot be gathered without cutting off the goats' beards⁹."

¹ See J. C. Sawer, *Odorographia*, 2nd series, London, 1894, 305.

² III, 112.

³ *E.g.* Dioscorides, *De materia medica*, I, 128. Strabo, XVI, iv, § 19, referring to the carriers of incenses becoming "drowsy by the odour of the aromatics," says that they remove this drowsiness "by the fumes of asphaltus and of goat's beard"; perhaps an allusion to ladanum, which is very similar in appearance to asphaltus and was often gathered on goats' beards.

⁴ *H.N.*, XII, 37; XXXVII, 77.

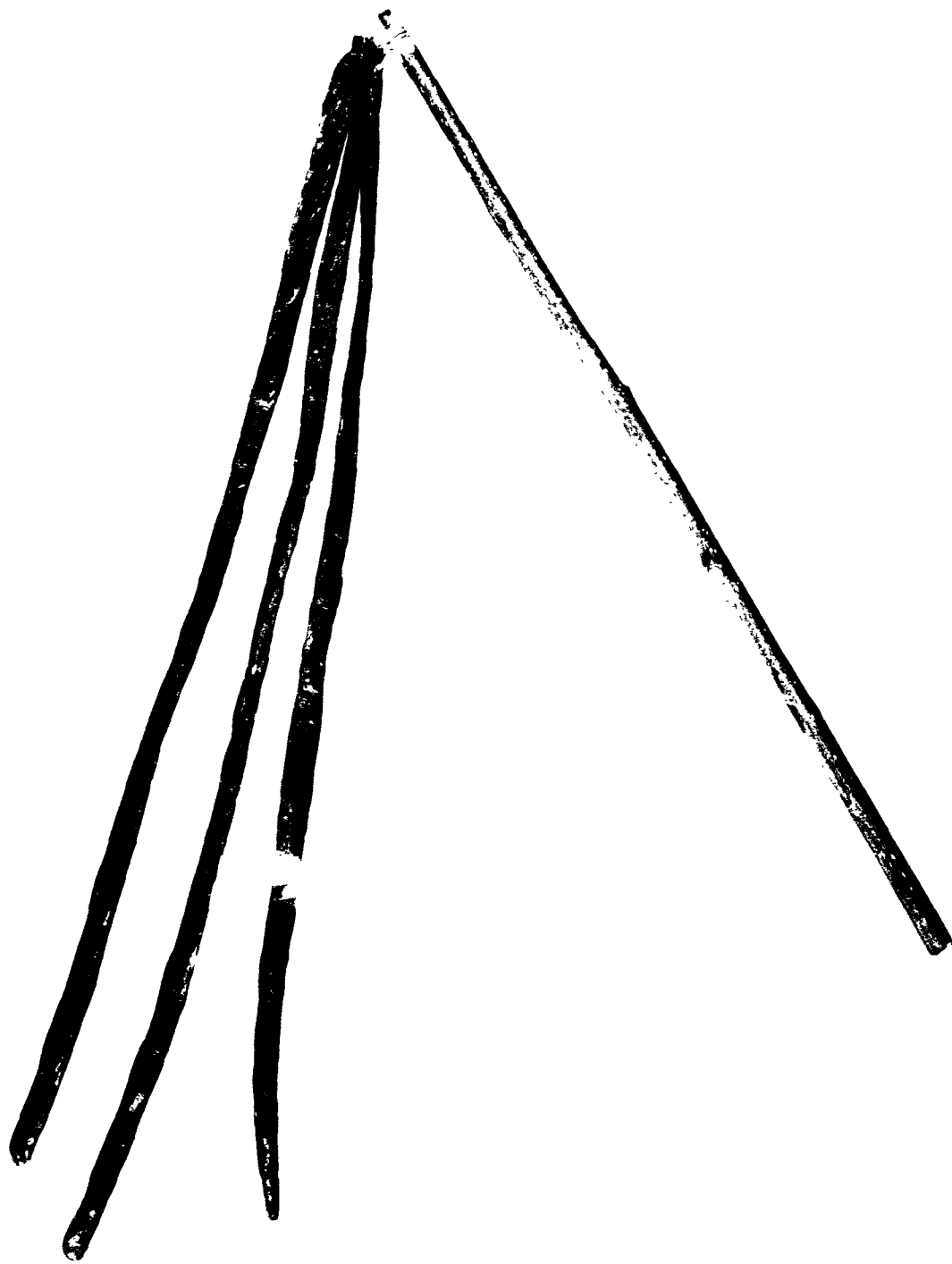
⁵ This emendation is, I think, necessary, because it would be very difficult, if not impossible, to extract the gum-resin from the animal's beard without applying great heat. In later times we have many records of the beards being cut off the goats, generally once a year, and the ladanum then separated from the hair by means of heat. A modern specimen of one of these goats' beards with ladanum on it, was brought from Cyprus in 1885 by Capt. Grant, R.E., and may be seen in the Museum at Kew Gardens.

⁶ *Voyages*, Paris, 1714, 380.

⁷ *Travels in the Levant*, London, 1687, Part I, 104; *cf.* also J. Heyman, *ap.* Cobham, *Excerpta Cypria*, Cambridge, 1908, 248.

⁸ *κισσαρος* or *κισθαρος* = *κισθος*, Dioscorides, *De materia medica*, I, 126; *cf.* Pliny, *H.N.*, XII, 37.








⁹ Was the "false beard" which was worn *below* the chin by the god Osiris originally a ladanum-laden goat's beard? This "false beard" is a veritable "goatee" and it is possible that it was a goat's beard worn



Modern instrument for gathering ladanum, from Crete. *Scale* $\frac{1}{2}$.

That the gum-cistus was recognised as the plant of Osiris even as late as Greek times is, I venture to believe, certain. Diodorus (I, 17) tells us that "the Egyptians attributed to Osiris the finding out of the *κίττος* and dedicate it to him, as the Greeks do to Dionysos; and in the Egyptian tongue they call the *κίττος* 'Osiris's plant' (*Φυτόν Ὀσίριδος*), which they prefer before the vine in all their sacrifices." Plutarch (*de Is.*, xxxvii) says that "the Greeks consecrate the *κίττος* to Dionysos, and among the Egyptians it is called *χενόσιρις*¹, the name signifying, as they say, 'the plant of Osiris.' *κίττος* is the Attic form of *κίσσος* and means 'the ivy'." Although the ivy is the well-known plant of Dionysos², it is never in any way, as far as I am aware, associated with Osiris either in Egyptian art or in Egyptian literature. Moreover the ivy is not an Egyptian plant, and it has not, in modern times at least, been found growing wild south of the Lebanon. Pliny (*H.N.*, xxiv, 48) draws attention to the similarity of the names *κίσσος* and *κίσθος* and then describes the latter plant correctly. But notwithstanding the fact that he notices the similarity of the two plant-names, he actually falls into the error of confusing the one plant with the other in earlier books of his *Historia Naturalis*. In his account of the *hedera* (ivy) he says:—"The two principal kinds in the ivy, as in other plants, are the male and the female. The male is said to have a larger trunk than the female, and a leaf that is harder and more unctuous, with a flower nearly approaching to purple; indeed the flower of both male and female strongly resembles the wild rose³, were it not destitute of smell." This passage is taken almost literally from Theophrastus's description of the *κίσθος*. "Of the *κίσθος*," writes the Greek naturalist, "they distinguish two kinds, the male and the female, in that one is larger, tougher, more glossy, and has a purple flower; both, however like the wild rose, save that the flower is scentless and smaller." The second passage in which Pliny confuses the ivy with the cistus is in his account of the gathering of ladanum (*H.N.*, xii, 37); after accurately describing the way the sweet-smelling gum-resin was collected, he says that it was gathered from "the flowers of the *hedera* (ivy)." Here he is obviously copying from some Greek author and reads *κίττος* for *κίσθος*⁴, translating the word by *hedera*. It is possible that Dioscorides also fell into the same error for he tells us that there was a species of *κασία* that bore the name *κιττω*, but if we read this Greek author in conjunction with a note in Pliny (*H.N.*, xii, 43) it is clear that he is referring to the cistus, for the Roman encyclopaedist says that there is "a choice kind of casia which the

by the priest who impersonated the god *Andety*. The beard of Osiris and the gods was of a different shape from that of living kings and nobles, which was square at the end. On the beard generally see Hugo Motefindt, "Der ägyptische Königsbart," in *Mitteilungen der Anthropologischen Gesellschaft in Wien*, Band I, Vienna, 1920, 133-40.

¹ The name *χενόσιρις* probably comes from the Egyptian    *ht-n-ir* "the plant of Osiris." For  meaning "a plant," see *Pap. Ebers*, 43, 6; 79, 13. Erman-Grapow, *Handwörterbuch*, give    "Kräuter."

² "The plant that Dionysos loved most in Greece, as in Thrace, appears to have been the ivy...and primitive thought identifying the god with the plant gave rise to the cult of Dionysos *κίσσος* at Acharnai," Farnell, *Cults of the Greek States*, v. 119. *Διώνυσος κίσσος* is known from Pausanias, I, 31, 6; cf. Theophrastus, *H.P.*, iii, xviii, 6.























³ W. Turner, *Herbal*, 1568, Pt. 1, 145, says that the Cistus was "called *rosa canina* in French." Parkinson, *Paradisi in Sole Paradisus terrestris*, 1629, 422, speaks of "the Gum Cistus or Sweete Holly Rose."

⁴ The editio princeps (Aldina, Venice, 1495-8) reads *κίσσος*: the emendation *κίσθος* is due to J. G. Schneider (Leipzig, ed. 1818-21).

barbarians call by the name of *lada*," and *lada* (Gr. $\lambda\eta\delta\alpha$) was the Arabian name of the *cistus* plant.

If I am right in my interpretation of the so-called "flail" as an instrument for collecting ladanum, a *ladanisterion*, then it follows that the Egyptians must have been acquainted with the sweet-smelling oleo-resin as early as the First Dynasty, for Narmer-Menes himself is represented holding the instrument in his hand. What was the Egyptian name for this sweet-smelling substance?

A large number of unguents and incenses are mentioned in Egyptian inscriptions but scarcely anything is known about their composition. At the present day the Egyptians and the 'Ababda, Bishârîn, 'Amâra, and Hadendoa of the Eastern Desert and Red Sea Province of the Sudan, as well as the Arabs dwelling in the Isthmus of Suez and in the Sinaitic Peninsula, employ a large number of sweet-smelling plants, woods and gums. Some of these are burnt as incense, others are pounded and mixed with fat or olive oil and rubbed on the hair and skin. Some are simply plucked and placed inside the cloak to scent the person. The modern Egyptians, like the Semitic and Hamitic peoples that I have mentioned, are especially fond of burning incense, and one of the favourite kinds is ladanum. It was known in the market at Sinkat and even in such unfrequented places as Dongonab and Halaib on the Red Sea when I visited the Red Sea Province in January, 1928. In ancient times the same was probably the case, for ladanum, as I have already noted, was an important article of commerce brought by the Ishmaelites to Egypt. It is mentioned also in the Rescript of the Roman Emperors relating to articles imported into Egypt from the East¹ towards the end of the second century A.D.

Among the names of incenses and unguents which occur in Old and New Kingdom inscriptions there is one   *ḥndw*, later                    

ADDITIONS TO THE NEW HIEROGLYPHIC FOUNT¹ (1928)

By ALAN H. GARDINER

During the past year (1928) only 10 new signs have been added, each in sizes *a* and *c*; accordingly 20 new sorts in all. A new category of signs (Section Ff) has been added in order to provide symbols for the transcription of hieratic, as set forth in my article appearing in the present number of the *Journal*. In the list below, the age, use, and source of the new signs are indicated. It will be remembered, of course, that Mr. and Mrs. Davies' drawings are adaptations, not exact facsimiles, of the models quoted: reduction in size, together with the need for a general conformity of appearance, makes certain modifications inevitable.

A 59	<i>a</i>	<i>c</i>	Det. <i>šḥr</i> "drive away." Dyn. XVIII, <i>Urk.</i> , iv, 618, 7.
A 60	<i>a</i>	<i>c</i>	Det. <i>štī</i> (<i>sti</i>) "sow." Dyn. XVIII, <i>Urk.</i> , iv, 615, 14.
B 7	<i>a</i>	<i>c</i>	Det. queen. Dyn. XVIII, Thebes, tomb of <i>Hrīw-f</i> , no. 192.
I 5*	<i>a</i>	<i>c</i>	<i>šbk</i> . Dyn. V, Davies, <i>Ptahhetep</i> , i, Pl. 9, no. 157.
Z 12	<i>a</i>	<i>c</i>	In <i>ḥwī</i> "strike." Ptolemaic, Edfu, Horus myth.
Ff 1	<i>a</i>	<i>c</i>	For Z7, X1 and other signs.
Ff 2	<i>a</i>	<i>c</i>	Substitute for V7, cf. Möller, <i>Hier. Pal.</i> , ii, no. 521.
Ff 3	<i>a</i>	<i>c</i>	Initial Δ, cf. Möller, <i>Hier. Pal.</i> , ii, no. 120.
Ff 4	<i>a</i>	<i>c</i>	Ear as det., cf. Möller, <i>Hier. Pal.</i> , ii, no. 159.
Ff 5	<i>a</i>	<i>c</i>	Feather <i>šw</i> , cf. Möller, <i>Hier. Pal.</i> , ii, no. 237.

Owners of the Catalogue should add cross-references to the four last signs under V7, Δ D54†, F21 and H6 respectively.

¹ *Catalogue of the Egyptian Hieroglyphic Printing Type from matrices owned and controlled by Dr Alan H. Gardiner.* Oxford. At the University Press. 1928.

A LETTER FROM CONSTANTINOPLE

BY VICTOR MARTIN

Among the Greek papyri emerging in ever-increasing number from the inexhaustible soil of Egypt, those which, though found there, were written in other portions of the ancient world gain from this very fact a supplementary interest. To this still comparatively small group may now be added the document of which the transcription follows:

P. Genev. Inv. 210.

Διός]κ[ορο]ς ὁ θαυμάσιος ὁ τήνδε μου τὴν ἐπιστολὴν ἀποδιδούς
τῇ ὑμ]ετέρᾳ ἐνδόξῳ ὑπεροχῇ ὥρμηται μὲν ἐκ τῆς Θεβαίων χώρας
ἀδ]ι[κ]ηθεὶς δὲ ὥς φησιν παρὰ τινῶν αὐτόθι τὴν ἐντεῦθεν βλάβην
ἀ[να]φέρων εἰς τὴν βασιλίδαν ταύτην παρεγένετο πόλιν ἰκέτης τε
5 γειόμενος τοῦ εὐσεβ(εστάτου) δεσπότης θεῶν ἔτυχεν συλλαβῶν πρὸς τὴν
ὑμετέραν φιλανθρωπίαν. μίαν ταύτην αὐτῷ βροθήσαν ἀσφαλῆ
καλῶς ὑπολαβὼν τὴν ἐκ τῆς ὑμετέρας δικαιοσύνης ἐπικουρίαν
ταύτης δεῖται τυχεῖν παρ' ὑμῶν καὶ τὴν ἐπιστολὴν ὑπὲρ τούτων
ῆτησεν πρὸς ὑμᾶς. οἶδα δὲ ὅτι καὶ τῆς ἐμῆς αἰτήσεως χωρὶς
10 αὐτῷ τε καὶ τοῖς ἄλλοις ἅπασιν τὰ δίκαια δίδωσιν ἢ ὑμετέρας
ὑπεροχῇ. παρακαλῶ δὲ καὶ σπουδὴν τινα πλείω προστεθῆναι Διοσκόρῳ
τῷ θαυμασίῳ ὥστε καμὲ χρήσιμον αὐτῷ φανῆναι καὶ ὑμᾶς πολλῶ
πλείονα τὸν ἀπὸ τοῦ δεσπότης θεοῦ μισθὸν ἀπολαβεῖν.†

There is a dash over the initial upsilon of words, and the sections are marked off by blank spaces left before *μίαν* (l. 6), *οἶδα* (l. 9) and *παρακαλῶ* (l. 11).—Vestiges of the address on the verso.

TRANSLATION.

“The admirable Dioscoros who is handing this letter of mine over to your illustrious sublimity is of the land of Thebaïd. Having been wronged, as he says, by certain persons there, reporting the damage sustained therefrom, he came to this royal city and, having become a suppliant of the most pious lord, he obtained sacred letters addressed to your humanity. Rightly understanding that the assistance derived from your justice is the only sure protection for him, he wishes to obtain it from you and has demanded this letter for you about his case. I know that, even without my request, justice is given to him and to all others by your sublimity. I urge however that a little more zeal be bestowed on the admirable Dioscoros, so that I myself may show myself useful to him and you may receive much more abundantly the reward from our Lord God.”

As seen at the first glance, it is a letter of recommendation written in Constantinople on behalf of a certain Dioscoros from the Egyptian Thebaïd who had come to the city of the Bosphoros on law business. The place wherefrom the missive was sent is determined beyond doubt by the mention of “this royal city” in l. 4, the phrase

being constantly used in Byzantine documents, papyri as well as legal books, to designate the capital of the Eastern Roman Empire¹. As is shown by the quotations in note 1, the use of such a phrase points in itself to the reign of Justinian, and a closer examination of our text confirms this impression. The conspicuous absence of any opening or closing formula is characteristic of that time. Fourth-century letters contain them without exception. In the fifth they begin to become rare, as will be seen for instance by an inspection of the series of letters published in P. Oxy. xvi which range from the fifth to the seventh centuries. Two of them only, 1870 and 1873, both attributed by the editors to the fifth century, still retain the well-known formulae of earlier times. In all the others they are either entirely or partially abandoned; in the latter case mostly modified. Thus, merely from its formal aspect, our letter might be safely assigned to the sixth century.

A study of the style leads to the same conclusion. There is hardly a word, expression, phrase or trick of style for which a parallel could not be found either in Justinian's Codex or in the papyri of the same period². The latter are chiefly represented by the archive found at Kôm Ishgau, on the site of the town called in antiquity Aphroditopolis, which became in Byzantine times Aphrodito. There is in fact little doubt that the letter here published belongs to this well-known group of texts. Their discovery was made

¹ Cf. P. Cairo Masp. 67032 (A.D. 551), where the place of the transaction is said to be (l. 5) ἐν τῇ λαμπρῇ καὶ ἐνδόξῳ Φλ(ανίου) Κ[ω]νσταντίνου πόλει Ῥώμῃ, reference being made later to ταύ[την] τὴν βασιλεῖδ[α] π[ό]λιν (l. 19), and ταύτης [τῆς βα]σιλείδος πόλεως (l. 115). Cod. Just. I. 1, 7 ὁ αὐτὸς βασιλεὺς (Justinian) τῷ... ἀρχιεπισκόπῳ τῆς βασιλίδος ταύτης πόλεως καὶ οἰκουμένικῳ πατριάρχῃ. *Id.* I. 11, 9 προστάττομεν τοὺς ἡμετέρους ἄρχοντας τοὺς τε κατὰ τὴν βασιλίδα πόλιν ταύτην καὶ τὰς ἐπαρχίας κτλ.

² We give here a selection of references illustrating the most notable expressions in our text.—Υπεροχὴ of the *praefectus praetorio* Cod. Just. I. 3, 43, 11 (A.D. 529), of the *comes privatorum rerum*, *ibid.* I. 5, 20, 8 (A.D. 530), of the *dux Thebaïdos* P. Oxy. 130. 20 (sixth cent.).—Ὠρμηται: P. Cairo Masp. 67032. 12 (A.D. 551) ὁρμῶ[μ]ενοι ἅπαντες ἀπὸ κώμης [καλο]υμένης Ἀ[φροδι]τῶν τοῦ Ἀν[τι]οπ[ολί]του Ῥ[ό]μου, 67024. 1 (rescript of Justinian to the *dux Thebaïdos*) ἐδίδα[ξεν] ἡμῖν ὁρμᾶσθαι μὲν ἐκ τῆσδε [τῆς] κώμης τῆς Θηβαίων χώρα[ς].—Ἀδικηθεῖς...παρά τινων, cf. P. Cairo Masp. 67024. 6 ἐπειδὴ δὲ παρὰ τῶν κατὰ καιρὸν ἀρχόντων οὐ τὰς τυχοῦσας ἀδικίας ὑπέμεινον.—Τὴν ἐντεῦθεν βλάβην ἀναφέρων, cf. P. Oxy. 1830. 17 (sixth cent.) ἐν τῇ ἰμετέρᾳ εὐδοκίμῃσιν (sic) ἀναφέρω τὰ πάντα meaning "I inform your honour of all this."—Βασιλίδα...πόλιν, cf. the preceding note.—Παρεγένετο, cf. P. Oxy. 1855. 8 (sixth or seventh cent.) καὶ παρεγένετο καὶ εἰς Πανδριν -- Ἰκέτης, cf. P. Cairo Masp. 67024. 12 ἐκ δευτέρου τοὺς ἰκέτας τὰς...συντελείας εἰσπράξαι, 19 ταῖς δεδομέναις...τῷ ἰκέτῃ θείαις συλλαβαῖς.—Εὐσεβεστάτον, cf. P. Cairo Masp. 67032. 1 βασιλ[εί]ας τοῦ θ[ε]ω[π]ω[τ]ᾶ[τος] καὶ εἰσε[β]ε[σ]τάτου δεσπ[ο]ύτου ἡμῶν Φ[λα]νίου Ἰου[στινιαν]οῦ.—θείων...συλλαβῶν, cf. Cod. Just. I. 3, 42 init. (instructions of Justinian to the *praef. praet.*) ταῦται πρὸς τὴν σὴν μακαριότητα ταῖς θείαις συλλαβαῖς χρῆσασθαι δεῖν φήθημεν, *ibid.* I. 1, 7 init. (instructions of Justinian to the patriarch. ἀναγκαῖον ἡγησάμεθα ταῦται πρὸς αὐτὴν (your holiness) χρῆσασθαι ταῖς θείαις συλλαβαῖς, P. Cairo Masp. 67024. 14 ἐδίδαξεν, περὶ τε τοῦτου θείας ἡμῶν ἤδη πορίσασθαι συλλαβὰς, cf. ll. 19, 52. The word is also used of private letters, without θείαι naturally, e.g. P. Oxy. 1164. 3, 1936. 5, both sixth-seventh cent.—Φιλανθρωπίας, cf. P. Cairo Masp. 67002 I. 11 (petition to the *dux*, sixth cent.). The plaintiff calls himself ἀθλίου δούλου τῆς ὑμῶν ἐνδόξου φιλανθρωπίας, 67007. 18 *idem*.—Παρακαλῶ constantly used in the letters of the sixth and seventh cent. published in P. Oxy. xvi, e.g. 1835. 7, 1856. 6, 1860. 9, 1874. 17 etc.—It seems also to be a characteristic of the time to separate a pronoun or adjective from the substantive on which it depends by the insertion of a word. In our text εἰς τὴν βασιλίδα ταύτην παρεγένετο πόλιν and θείων ἔτυχεν συλλαβῶν may be compared with phrases like τὰςδε τὰς [ισ]ίας συγγράφου[σιν] ὁμολογείας (P. Cairo Masp. 67032. 6), μεθ' ὧσης νόμος ἀκριβείας προστάττει (P. Cairo Masp. 67024. 40), ἐπὶ νέας ἔτι τυγχάνουσιν ἡλικίας (P. Cairo Masp. 67026. 4), ταῦται πρὸς αὐτὴν χρῆσασθαι ταῖς θείαις συλλαβαῖς (Cod. Just. I. 1, 7 init.), τὰ εἰς ἐκκλησιαστικὴν ὁρῶντα κατὰστασιν (*id.*, *ibid.*). The presence of all these linguistic peculiarities would suffice to assign our letter to the time of Justinian or thereabouts, if there were no others.

during the years 1905-7¹, and our letter was brought from Egypt by J. Nicole with other documents acquired by purchase precisely in 1907. It is thus probable that, though the bulk of the discovery was secured by Lefebvre for the Cairo Museum, some pieces at least remained in the hands of workmen and found their way to the local dealers. This would explain the presence of this document, and apparently others from the same provenience, in the Geneva collection². The coincidence of dates just mentioned is not the only point of contact between our text and the Aphrodito group. As every papyrologist knows, these papers represent the archive of Dioscoros son of Apollos, the notary-poet of his native town, and many of them concern his own private affairs. Though one must always reckon with the possibility of homonymy, the identity of this Dioscoros with ours appears very probable. The more so when we compare the situation revealed by the present letter with certain circumstances of the life of Dioscoros of Aphrodito³. He was concerned in several legal affairs which were tried in Constantinople before the Imperial court of justice. They were either private to him, or connected with the community of which he was a prominent member. On account of these suits he had certainly to make the journey to the Imperial city either once or several times; what is certain is that he was personally there at least in A.D. 551 (P. Cairo Masp. 67032). This situation is exactly that of the Dioscoros of the letter. When we see then that both Dioscori, beset with legal difficulties, go to the Imperial city, that both obtain "sacred letters" from the emperor and with them go back to their native Thebaïd to get justice there from the local authorities on the basis of the imperial ordinances, does not the identity of the circumstances justify the assumption that the persons involved in them are not different, but one and the same? Consequently, we will henceforth assume this identity for proved and consider our Dioscoros and him of Aphrodito as one and the same person.

It has already been mentioned that Dioscoros had been engaged in several law-suits which occupied the Imperial court of justice in Constantinople. We are informed about them by the following documents. P. Cairo Masp. 67032, dated June A.D. 551, is an agreement made in Constantinople between four citizens of Aphrodito, the first being Dioscoros, on one side, and two members of the Imperial council, Palladios and Epigonos, on the other, by which the said Palladios undertakes, under certain conditions, to act as *exsecutor negotii*, or solicitor on the spot, in the suit they have against Heracleios, son of Psaios and associates according to the *sacra jussio* they have obtained from the Emperor. The nature of the case does not appear, only that there is a plurality of litigants on both sides. The document mentions a second case which concerns the right of Aphrodito to collect its own taxes (*autopragia*, ll. 93 ff.). It is apparently independent of the former. For this also the help of Palladios is contemplated. Besides this important document, we know of four imperial rescripts concerning the legal affairs of Dioscoros.

¹ On the papyrus discovery of Kôm Ishgau, illustrious on account of the Menander, see Gustave Lefebvre, *Fragments d'un manuscrit de Ménandre*, Le Caire, 1907, *Archiv für Papyrusforschung*, iv, 503, J. Maspero, *Catologue général du Musée du Caire, Papyrus grecs d'époque byzantine*, I, ii (Le Caire, 1911).

² Attention was called to this by Mr. H. I. Bell who, stopping a few days in Geneva on his way to Egypt, looked at my transcriptions of unpublished texts and recognized in our letter a document from the Aphrodito group. Among the papyri still undeciphered he attributed the same origin to several fragments, on the evidence of the hands. Since then we have discussed many points concerning this letter, and Mr. Bell's unequalled knowledge of Byzantine Egypt has been invaluable to an editor much less familiar with this field of papyrology.

³ On the life and personality of Dioscoros, see J. Maspero, *Un dernier poète grec d'Égypte, Dioscore fils d'Apollon*, in *Rev. des Études grecques*, xxiv, 426 ff. (1911) and Bell's remarks in P. Lond. v, iii.

They are published in the catalogue of the Byzantine papyri in the Cairo Museum under the numbers 67024 (duplicate 67025), 67026 (duplicate 67027), 67028, 67029. The problems raised by the presence of duplicates and certain formal features of these documents have been submitted by J. Partsch to a thorough examination, the result of which was that he held them to be not, as the first editor contended, mere school exercises and referring to fictitious cases, but authentic rescripts or, more exactly, translations into Greek of originals written in Latin and emanating from the Imperial offices¹. Thus the difficulties mentioned find a ready explanation. In fact Dioscoros appears nominally in only two of them, 67026 (=67027) and 67028, but the nature of the cases mentioned in the two others, the evident relation between them and the affairs with which the contract Cairo Masp. 67032 was concerned, the recurrence of certain names, make it very unlikely that they concern anybody but Dioscoros. If it is so, he received four different rescripts². This would imply four different suits at least, since it is quite possible that the *sacra jussio* mentioned in Cairo Masp. 67032. 23 is again distinct from the four of which copies have been preserved³. Then the question arises: to which of those suits does our letter refer? Unfortunately no answer can be given. Neither the letter nor the rescripts are dated. Besides, the description of the case in l. 3 of the former is so vague—it speaks only of “wrong received from some people”—as to suit the conditions revealed in P. Cairo Masp. 67032 and in at least three of the rescripts where the adversaries of Dioscoros are a plurality (67024, 67026, 67029). Are we even justified in taking literally the plural in l. 3? I would hesitate, for my part, to rule out a connection between our letter and 67028 on this sole ground. On the other hand, the phrase in question might well refer to several suits. Nothing forces us to admit that Dioscoros went four times to Constantinople. He may have brought different suits at the same time and received simultaneously several rescripts. The fact that Dioscoros alone is mentioned in the letter, whereas in the contract Cairo Masp. 67032, the rescript 67026 and perhaps elsewhere there are other plaintiffs besides him, is not to be pressed, since the author of the letter writes very vaguely, and Dioscoros was evidently the leader in the cases just alluded to. Thus the new document does not allow any conclusion about the connection of 67032 with 67024 and the other rescripts, nor about the number of journeys made by Dioscoros to the capital.

¹ J. Partsch, *Neue Urkunden zum justinianischen Rescriptenprozeß in Nachrichten der k. Gesellsch. der Wiss. zu Göttingen*, Phil.-hist. Klasse, 1911, 201 ff. In this very important paper the author deals with all the Dioscoros papyri concerning law-suits conducted in Constantinople. It was consequently most helpful for the interpretation of our letter.

² Bell suggests in P. Lond. v, 70, n. 1 against Partsch that some of the rescripts contained in P. Cairo, if they are authentic, may concern homonyms of our Dioscoros. This suggestion was prompted by the desire to limit the number of Dioscoros' journeys to the capital, but, as we point out in our main text, several rescripts may have been obtained at the same time and we need not postulate as many voyages as rescripts. [It may be pointed out that the strongest reason for regarding certain of these rescripts as, if not fictitious, at least referring to some other person is the extreme difficulty of reconciling the biographical details which emerge from them with what we know of the poet's family. But the question is very complicated.—H. I. B.]

³ The relation, if any, between the contract 67032 and the rescript 67024 has been much discussed. For Maspero (*ad loc.*), and Gelzer, *Archiv für Papyrusforschung*, v, 1911, 370 f., the *θεία κέλευσις* of 67032. 23 is identical with the rescript preserved in 67024. Partsch, *loc. cit.*, 217, objects that the persons appearing as plaintiffs in both documents are not the same. This is a valuable argument, but when he argues, apparently from the plural *σὺλλαβὰς* in 67024. 14, that *several* different rescripts of earlier date are there mentioned, we cannot follow him, since the word is never used in the singular (*op. cit.*, 215, 218).

Who was the sender of the letter and for whom was it destined? According to the epistolary style prevailing at the time, the name of neither of them is mentioned in the course of the document. There is no direct allusion to their respective quality either. These points, very important especially for the recipient, were cleared up by the address on the verso, which is often very elaborate¹. Here the address, which would have settled the problem, is unfortunately too much obliterated to be read, and the solution must be sought elsewhere. The personality of the recipient may be determined with a fair degree of probability from what we know of the administration of justice at the time². It was open to any plaintiff to go to the capital and lay his case before the Imperial court of justice. There it was examined and an answer given in the form of a rescript, which very briefly outlined the case and indicated the general principles upon which it was to be settled if, after verification, the facts alleged by the plaintiff should prove true³, the burden of verification and the final settlement being left to the local judge. Such answers, called in Greek *θεία κέλευσις*, *θείαι συλλαβαί*, *θέσπισμα* etc., were prepared by the quaestor of the sacred palace⁴ (*quaestor sacri palatii*) and addressed to the local magistrate, generally to the governor of the province from which the plaintiff originated. They were not directly sent to him; the original copy written with purple ink in the formal calligraphy of the quaestor's office and bearing the latter's and the emperor's signatures⁵ was handed over to the plaintiff, who had to bring it to the local judge himself. For this purpose, among others, the plaintiff appoints an *exsecutor negotii*, whose function is now well illustrated by P. Cairo Masp. 67032⁶. From the above it appears beyond doubt that the recipient of the letter is no other than the local magistrate on whose decision depended the settlement of the suit or suits. As all the rescripts preserved among or mentioned in the Cairo texts are addressed to the *dux et augustalis* of the Thebaïd⁷, it is a safe conclusion to regard the recipient of our letter as precisely this high official. In confirmation of this theory comes the fact that he is addressed as "sublimity" (*ὑπεροχὴ*), a title which is only used for officials of very high rank⁸.

As for the sender of the letter, he must have occupied in the hierarchy a position

¹ Numerous specimens in P. Oxy. xvi, e.g. Oxy. 1857, 1858, 1860, etc.

² Patsch, *op. cit.*, 207, Germaine Rouillard, *Administration civile de l'Égypte byzantine*, 153.

³ Cod. Just. I, 23, 7 init.: "universa rescripta sive in personam precantium sive ad quemlibet iudicem manaverint, ... sub ea condicione proferri praecipimus, si preces veritate nituntur, nec aliquem fructum precator oraculi percipiat impetrati, nisi quaestio fidei precum imperiali beneficio monstretur inserta."

⁴ This appears from the phrase immediately following that which is quoted in the preceding note and which runs thus: "Nam et vir magnificus quaestor et viri spectabiles magistri scriniorum qui sine praefata adjectione quaecumque divinum responsum dictaverint et iudices qui susceperint reprehensionem subibunt."

⁵ Cf. for the purple ink Cod. Just. I, 23, 6, and for the signatures Cod. Just. I, 23, 3, Nov. 114.

⁶ Cf. Patsch, *op. cit.*, 241 f., P. Thomas in *Études d'hist. juridique offertes à P. F. Girard*, I, 379-416. The sender of our letter is certainly not the *ἐκβιβαστής* (*exsecutor*), since the latter's part was precisely to go over to the litigant's residence and see to the execution of the imperial sentence on the spot. According to Cod. Just. XII, 60, 6, one *exsecutor* was not allowed to take charge of more than two cases at a time in the same place: "non prohiberi (sancimus) unum eundemque executorem ab hac urbe regia proficiscentem duorum simul, non plurium negotiorum executionem suscipere." If so, Dioscoros, coming to Constantinople in connection with several cases, should have appointed different *executores* for every couple of them. In fact the contract Cairo Masp. 67032 mentions two things separately of which Palladios is to take charge: the case against Herakleios and others (l. 24) and the *autopragia* (l. 85).

⁷ P. Cairo Masp. 67024, 67026, 67028, 67029. Cf. Patsch, *op. cit.* On the juridic activity of the *dux*, see G. Rouillard, *op. cit.*, 145.

⁸ Cf. Zehetmair, *De appellationibus honorificis in pap. graec. obscis*, 29 (1912) and p. 97, note 2 above.

higher still. He does not write in a private manner, but as an official to another of equal or rather slightly inferior rank. Under the polite formulae at the end the commanding tone is easily perceptible. Such a letter would have been useless unless it came from a person whose situation gave him natural influence upon the recipient. If the latter was the governor of the province, we may look for the sender among the superiors of this official in the central administration. The first to present themselves are the *quaestor* just mentioned¹, and the head of his office, the *magister scriniorum*, though the latter was perhaps hardly important enough to justify the attribution of the letter to him. In judicial matters, the recommendation of the *quaestor* should have been very effective. On the other hand, as the XIIIth edict of Justinian shows, the direct superior of the *dux Thebaïdos* was the *praefectus praetorio Orientis*². That Dioscoros should have solicited a recommendation from that quarter appears also as very natural. Another high personage whose name might also be mentioned in this connection is the *magister militum*³. In the absence of any clue in the text of the letter, a final choice among these officials is impossible. The more suitable candidates seem to be the *quaestor* and the *praefect*, with perhaps a preference for the latter, since his support was certainly the more valuable to Dioscoros, whose affairs, as is known from the Cairo documents, were not wholly private, but also concerned with the administration of the province.

But whoever the writer of the letter may have been, one important thing is certain, and that is that he must have occupied a very high position at the Imperial court. This confers a special interest on the document from a palaeographical point of view, since it supplies us with a specimen of the formal hand used in the offices of the metropolitan high officials in the time of Justinian. We need not dwell here on this aspect of our papyrus, for a facsimile of it with a palaeographical description will be published in the next issue of the New Palaeographical Society. It may be noted, however, that the hand differs notably from that of the two other Constantinopolitan documents already published from the Aphrodito find. P. Cairo Masp. 67032 and 67126, as will be seen from an inspection of the respective plates in the Cairo catalogue. The explanation is apparently to be sought in the different origin of the texts; the latter two being private contracts drawn up in private offices, whereas the former is the work of a scribe trained in the official practice of the imperial administration. The fact that the document is the original letter and not a copy is proved by the presence of the address on the verso.

One may ask on what ground the recipient of such a letter knew that it was authentic and not a forgery, since there is nothing in it, at least in its present state, to certify its genuineness. The hand is certainly not individual and would tell no more than that of a type-written letter of to-day. There is no equivalent of a signature such as was provided in missives of earlier times by the salutations at the end, written in the writer's own hand and authenticating the document. The required authentication however may have been supplied by a seal attached to the folded letter, which has naturally not been preserved. On some letters the place where the seal was affixed is still visible from a blank space left in the address, sometimes right in the middle of a word⁴.

¹ Cf. Cod. Just. I, 23, 7 quoted above on page 100, note 4.

² Justinian's XIIIth edict (Novellae, ed. Schoell, 780) deals with the reorganization of Egypt attempted by this emperor in 538 and is addressed to the praefect. Cf. G. Rouillard, *op. cit.*, 24, 32, 34 ff., M. Gelzer, *Stud. zur byz. Verwaltung Aegyptens*, 29.

³ Cf. J. Maspero, *Organisation militaire de l'Égypte byzantine*, 77 ff. What is said there of the relation between the *magister* and the *dux* does not make the attribution of our letter to the former very probable.

⁴ E.g. P. Cairo Masp. 67200 and J. Maspero's note, *Oxy.* 1831, 1838: 4, 1863, etc.

forces in Egypt increased and preparations for the operations in Palestine began to develop, re-arrangements of staff became necessary, and most unfortunately these involved the return of Sir John Maxwell to England. Had it been possible to retain him in Egypt in the following years, his influence and his knowledge of the country would almost certainly have avoided many of the difficulties and misunderstandings which subsequently arose.

His next post was Commander-in-Chief in Ireland at a very difficult time, after which he became General Officer Commanding-in-Chief of the Northern Command until 1919.

With the termination of his military career he was free to devote his energies to other things, and one of these was Egyptian archaeology. A private collection, begun long before in Egypt and added to from time to time as opportunity occurred, had kept his interest alive, and by the time he disposed of it last summer it comprised a large number of representative pieces illustrating the arts and crafts of Ancient Egypt. On the death of Field-Marshal Lord Grenfell, Sir John succeeded him as President of the Egypt Exploration Society, and from then up to the time of his death devoted himself wholeheartedly to its welfare and its advancement. He laboured strenuously and successfully in the Society's interest, urging upon many the need for supporting the work which it is doing for the publication of what remains from ancient times, and for the systematic and scientific excavation of ancient sites. As a close personal friend of the late Earl of Carnarvon he was greatly interested in the discovery and the subsequent investigation of the tomb of Tutankhamūn. Later, as an executor of Lord Carnarvon, he was associated with the arrangements made for the preservation of this important discovery.

Though Sir John Maxwell had many interests and many fields of activity, his loss will nowhere be more keenly felt than among those who are interested in the archaeology of Egypt, since he appreciated how much there still remains to be done and how urgent is the need for the work to be taken in hand before damage and deterioration overtake much of what still remains.

H. G. L.

ARTHUR CRUTTENDEN MACE¹

Died April 6th, 1928

Arthur Mace was born in 1874. He was educated at St. Edward's School, Oxford, and Keble College, Oxford. After taking his degree he held a teaching post for a short time, but gave it up to join Sir Flinders Petrie, his cousin, in the excavations at Denderah. In 1898-99 he was with Petrie at Hû and contributed a chapter to the volume which, under the name of *Diospolis Parva*, described the work done in that area.

The two seasons 1899-1900 and 1900-1 he spent at Abydos, where he took an important part with Petrie in the excavation of the royal tombs of the first two dynasties: his work in other parts of the Abydos cemeteries is published in *El Amrah and Abydos*, a book produced entirely by himself and David Randall-MacIver, a very dear friend of his from this time onward.

In the autumn of 1901 he joined Dr. Reisner, who was in charge of the Hearst Egyptian Expedition of the University of California, with whom he continued working until 1906, mostly at Gîzah and Nag' ed-Dêr. The solid patient work done in those years is testified to by his contributions to the great volumes on the early dynastic cemeteries of Nag' ed-Dêr.

Mace's fortunes after 1906 are intimately bound up with those of the Metropolitan Museum. In October of that year, when the Museum decided to organize a department of Egyptian Art, its newly-elected Director, Dr. A. M. Lythgoe, a former colleague of Mace's on the Hearst Expedition, invited Mace to join him. Mace left for Egypt at once, procured the concession of Lisht, and began work on the pyramid of Amenemmes I and in the surrounding cemetery, in which the famous tomb of Senebtisi was found. In the following season, 1907-8, Mace was again at Lisht working still on the pyramid, as also during the season 1908-9, after which he was appointed Assistant Curator in the Egyptian Department of the Museum. This new appointment called him to New York during 1909-11, where he assisted Lythgoe in arranging the new Egyptian wing of the Museum. In the season of 1911-12 he was again in New York, in charge of the Department during Lythgoe's absence, working on the material discovered at Lisht, and in particular starting the publication of *The Tomb of Senebtisi*.

In 1912-13 he was back in Egypt, working over the plans and notes on the cemetery of the Amenemmes pyramid and the tomb of Senebtisi, with a view to publication. The next year saw a big campaign of excavation on the pyramid.

The outbreak of the war found Mace in London. In 1915 he enlisted in the 2nd Battalion, 29th London Territorial Regiment (Artists Rifles), from which he was eventually transferred, owing to the state of his health, and much to his grief, to the Army Service Corps, in which he served in England and Italy. He was still in the army when *The Tomb of Senebtisi* at last appeared in 1917.

In the winter 1919-20 Mace returned to New York, where he was mainly occupied in restoring the jewel caskets of the princess Sit-hathor-iunut found by Petrie at El-Lâhûn

¹ We had hoped to print an account of Mace's career from the pen of Dr. A. M. Lythgoe, who of all men was in the best position to know and appreciate it. An illness has prevented Dr. Lythgoe from carrying out his promise, and we have consequently endeavoured to make up the loss by means of notes kindly supplied by two great friends of Mace's—Dr. Randall-MacIver and Mr. Winlock—both of whom we thank for the trouble they have taken.

It is a matter of doubt whether this letter ever reached its destination, for it is strange to find it in Dioscoros' archive. As appears from l. 1, it was Dioscoros himself who took it from Constantinople to the Thebaïd, but if it was not handed back to him by the receiver with other documents concerning his suits, the only alternative is that, for some unknown reason, he failed to deliver it. The former supposition seems, however, more probable. The very summary way in which the matter in question is alluded to shows that the addressee must have had at his disposal more information from other sources. These were evidently the "sacred letters" mentioned in l. 5, which dispensed the writer from enlarging further on the subject. This is yet another reason for regarding the *dux* as the recipient.

GENERAL SIR JOHN MAXWELL, P.C., G.C.B.

Born 1859. Died 1929.

All those who are interested in Egypt, whether in its modern phases or in the record of its ancient civilization, will have learned with deep regret of the death of General Sir John Maxwell at Cape Town in February last.

Born in 1859, he was educated at Cheltenham, and joined the 42nd Royal Highlanders (now 1st Battalion, The Black Watch) in 1879. His regiment proceeded to Egypt in 1882, took part in the battle of Tell el-Kebîr in the Highland Brigade, and remained in Egypt as part of the Army of Occupation. This was the beginning of Sir John Maxwell's connection with Egypt, which continued with but short interruptions almost until his death.

He was one of the first group of British officers who were seconded in 1883 for service with the new Egyptian Army, which Sir Evelyn Wood was organizing, and in it he took part in the Nile campaign of 1884-85. When his uncle Sir Francis Grenfell became Sirdar of the Egyptian Army in succession to Sir Evelyn Wood he appointed Maxwell to be his A.D.C., and in this capacity, and later as Military Secretary, Maxwell saw further service against the dervish forces outside Suakin in 1888, and on the Nile at Toski in 1889. The Sirdar was himself much interested in all that concerned the ancient history of Egypt, and had, while at Aswan, cleared the rock tombs which still bear his name. Thus Maxwell's interest in the subject was early aroused, and throughout his life he keenly followed all aspects of archaeological research in Egypt.

In 1896 the advance on Dongola commenced, as the first step in the reconquest of the Sudan, and in all the operations which culminated in the battle of Omdurman he played a prominent part, commanding the 2nd Brigade in this final action. In 1898 he became Governor of Omdurman and carried out the responsible duties of this post with conspicuous success. As a Military Governor, both at Omdurman and later at Pretoria, his shrewdness, tact, kindness, his readiness to accept responsibility and his firmness in administration were seen to the fullest advantage, and in both cases his governorship quickly led to orderly and stable government.

In 1900 he was called to the South African War, and on the termination of military administration there he returned to England. Eight years later, however, he was selected for the post of G.O.C. Egypt, and thus returned to the land where his keenest interest lay. He held this appointment for four years until 1912, but only two years later, on the outbreak of war, he arrived in Cairo to command the British forces. During these two years Lower Egypt was threatened by the Turks on the Suez Canal and by the Senussi tribesmen on the west. Martial law came into operation, and the administration of the country generally was greatly disorganized by the war which had spread throughout the length and breadth of Europe. It was most fortunate at this juncture that the command in Egypt could be placed in the hands of one who not only knew the country, its needs, and its characteristics, but who was also known personally to a very large number of Egyptians, and reckoned many among them as his personal friends. As the British

forces in Egypt increased and preparations for the operations in Palestine began to develop, re-arrangements of staff became necessary, and most unfortunately these involved the return of Sir John Maxwell to England. Had it been possible to retain him in Egypt in the following years, his influence and his knowledge of the country would almost certainly have avoided many of the difficulties and misunderstandings which subsequently arose.

His next post was Commander-in-Chief in Ireland at a very difficult time, after which he became General Officer Commanding-in-Chief of the Northern Command until 1919.

With the termination of his military career he was free to devote his energies to other things, and one of these was Egyptian archaeology. A private collection, begun long before in Egypt and added to from time to time as opportunity occurred, had kept his interest alive, and by the time he disposed of it last summer it comprised a large number of representative pieces illustrating the arts and crafts of Ancient Egypt. On the death of Field-Marshal Lord Grenfell, Sir John succeeded him as President of the Egypt Exploration Society, and from then up to the time of his death devoted himself wholeheartedly to its welfare and its advancement. He laboured strenuously and successfully in the Society's interest, urging upon many the need for supporting the work which it is doing for the publication of what remains from ancient times, and for the systematic and scientific excavation of ancient sites. As a close personal friend of the late Earl of Carnarvon he was greatly interested in the discovery and the subsequent investigation of the tomb of Tutankhamūn. Later, as an executor of Lord Carnarvon, he was associated with the arrangements made for the preservation of this important discovery.

Though Sir John Maxwell had many interests and many fields of activity, his loss will nowhere be more keenly felt than among those who are interested in the archaeology of Egypt, since he appreciated how much there still remains to be done and how urgent is the need for the work to be taken in hand before damage and deterioration overtake much of what still remains.

H. G. L.

ARTHUR CRUTTENDEN MACE¹

Died April 6th, 1928

Arthur Mace was born in 1874. He was educated at St. Edward's School, Oxford, and Keble College, Oxford. After taking his degree he held a teaching post for a short time, but gave it up to join Sir Flinders Petrie, his cousin, in the excavations at Denderah. In 1898-99 he was with Petrie at Hû and contributed a chapter to the volume which, under the name of *Diospolis Parva*, described the work done in that area.

The two seasons 1899-1900 and 1900-1 he spent at Abydos, where he took an important part with Petrie in the excavation of the royal tombs of the first two dynasties: his work in other parts of the Abydos cemeteries is published in *El Amrah and Abydos*, a book produced entirely by himself and David Randall-MacIver, a very dear friend of his from this time onward.

In the autumn of 1901 he joined Dr. Reisner, who was in charge of the Hearst Egyptian Expedition of the University of California, with whom he continued working until 1906, mostly at Gîzah and Nag' ed-Dêr. The solid patient work done in those years is testified to by his contributions to the great volumes on the early dynastic cemeteries of Nag' ed-Dêr.

Mace's fortunes after 1906 are intimately bound up with those of the Metropolitan Museum. In October of that year, when the Museum decided to organize a department of Egyptian Art, its newly-elected Director, Dr. A. M. Lythgoe, a former colleague of Mace's on the Hearst Expedition, invited Mace to join him. Mace left for Egypt at once, procured the concession of Lisht, and began work on the pyramid of Amenemmes I and in the surrounding cemetery, in which the famous tomb of Senebtisi was found. In the following season, 1907-8, Mace was again at Lisht working still on the pyramid, as also during the season 1908-9, after which he was appointed Assistant Curator in the Egyptian Department of the Museum. This new appointment called him to New York during 1909-11, where he assisted Lythgoe in arranging the new Egyptian wing of the Museum. In the season of 1911-12 he was again in New York, in charge of the Department during Lythgoe's absence, working on the material discovered at Lisht, and in particular starting the publication of *The Tomb of Senebtisi*.

In 1912-13 he was back in Egypt, working over the plans and notes on the cemetery of the Amenemmes pyramid and the tomb of Senebtisi, with a view to publication. The next year saw a big campaign of excavation on the pyramid.

The outbreak of the war found Mace in London. In 1915 he enlisted in the 2nd Battalion, 29th London Territorial Regiment (Artists Rifles), from which he was eventually transferred, owing to the state of his health, and much to his grief, to the Army Service Corps, in which he served in England and Italy. He was still in the army when *The Tomb of Senebtisi* at last appeared in 1917.

In the winter 1919-20 Mace returned to New York, where he was mainly occupied in restoring the jewel caskets of the princess Sit-hathor-iunut found by Petrie at El-Lâhûn

¹ We had hoped to print an account of Mace's career from the pen of Dr. A. M. Lythgoe, who of all men was in the best position to know and appreciate it. An illness has prevented Dr. Lythgoe from carrying out his promise, and we have consequently endeavoured to make up the loss by means of notes kindly supplied by two great friends of Mace's—Dr. Randall-MacIver and Mr. Winlock—both of whom we thank for the trouble they have taken.

and acquired by the Metropolitan Museum. To this task he brought a skill and delicacy of hand such as are rarely found in combination with so scholarly a temperament. The years 1920-22 saw the excavations at Lisht again taken up, and in 1922 Mace was appointed Associate Curator in the Department of Egyptian Art in the Museum. In the season 1922-23 he was expecting to continue and even to finish the excavations at Lisht when an appeal from Lord Carnarvon, who had just found the tomb of Tutankhamūn, led the Trustees of the Museum very generously to assign to this work most of their excavating staff, and among them Mace. The value of Mace in this work is well known to all who have read the volumes published on the tomb.

After serving two winters on this task, Mace suffered a complete breakdown. The next four years were spent in England, on the Riviera, in Switzerland and in New York in the attempt to recover his health, but in vain. He lost ground slowly but steadily, and finally died on April 6th, 1928. He made several attempts to work up his notes for the publication of the Amenemmes pyramid, and it was his bitter regret to find himself incapable of the energy required for the task. It would surely have consoled him to know that a colleague could afterwards write: "While of course no one can ever hope to gain Mace's first-hand knowledge of the pyramid, still, so full, so complete and objective are his notes, that his work has been passed on to his successors with the minimum of loss possible under the circumstances." Surely this is the highest tribute which one archaeologist can pay to another.

Such is the trite record of some of the facts of Mace's work for Egyptology. It forms good testimony to its quantity. As to its quality, let it suffice to quote from the words of one who worked with him:

"These bald dry notes can give very little idea of Mace's contribution to the Metropolitan Museum of Art Expedition, however. To him, more than to anyone else, is due the field organization of the Expedition. Mr. Lythgoe was always in charge of the financial and administrative side, perforce leaving to Mace the starting of the work in the field. Mace it was who founded its first camp, collected and trained its first workmen, and started its first records, setting a standard which his successors can do no more than attempt to imitate. Conscientious and painstaking in his scientific work far beyond the average, energetic and tireless in his attention to the details of running a job, and possessing the unlimited confidence of his workmen, he made an ideal excavator. Moreover, to his fertile ingenuity were due many of the methods adopted in the Museum in New York for the exhibition of the Egyptian collection."

Another fellow-worker writes: "It was astonishing how he triumphed over a very weak constitution and never let it hinder him. He was very happy in his work with the Metropolitan, and they are all very warm friends of his." The full value of the tribute contained in the last few words will be appreciated if it be remembered that Mace was an Englishman working in the service of a foreign Museum.

Mace never advertised. The knowledge that he had worked hard and honestly was sufficient reward for him. His contribution to his subject lies not merely in the volumes he has published or those in which his notes and observations have been and still remain to be utilised, but in a long career of excavation on the most painstaking and scientific lines, in the part he took in the development of the Egyptian wing of the Metropolitan Museum, and in the high tradition of work in the field, in the museum and in the study which he has left to his successors. The Egyptian natives who worked under him will remember him as a firm yet sympathetic director who had realised that one of the first requisites of a good excavator is a serious attempt to understand the workings of the oriental mind.

NOTES AND NEWS

Under the direction of Dr. Frankfort, with the co-operation of Mr. W. B. Emery, the first part of the excavation season was devoted to Armant, where, as was announced in the last number of the *Journal*, our expedition hoped to find the burial-place of the Buchis bulls. The complete success of this undertaking has already been made public in *The Daily Telegraph* of December 11th, January 3rd, and 4th, the last-named issue containing excellent photographs of the work in progress and of some of the finds. The newly-discovered site is approached by a slope from the west, which becomes, as it descends, a subterranean passage. At right angles to this are two transverse passages, both of which are flanked by large roughly hewn vaults. These vaults contain—or contained—sarcophagi of sandstone, roughly three metres by two by two, many of which are now destroyed. Within these lay the mummified remains of the bulls, whose bones (in some cases) and the merest fragments of whose trappings are all that have been left to us by the ancient robbers. After the bulls were interred, pottery stands for incense and other offerings, offering tables (of an unusual type with miniature stairs leading down to a central well) and stelae of stone were placed outside the tombs, and on the latter were recorded the circumstances of the bull's life—the dates of his birth, induction to Armant as Buchis, and death. From the stelae, which show above the text a relief of the dead bull receiving the oblations of the Ptolemaic or Roman Pharaoh, it is possible to determine the dates of many of the burials, and it is likely that they will throw light on some chronological problems of the Ptolemaic period. A lintel and other fragments of masonry, perhaps coming from the temple above the subterranean burial-place, take the date of the site back to the Eighteenth Dynasty, while the evidence for the burials themselves implies that they began not earlier than the Persian or perhaps Saite period, but lasted, on the other hand, down to the time of Diocletian. It is reasonable to suppose that burials earlier than the Saite period were made, but these may have been on a less elaborate scale than the later ones, and have yet to be discovered, for the site has by no means been completely explored, and another season's work awaits us next year.

At the end of January the expedition moved to El-'Amarnah to continue work on the northern half of the town-site. Mr. E. B. O'Rorke, who, as announced in the last number of the *Journal*, was to have joined the party as architect, found himself unable to leave England, and consequently Mr. Seton S. Lloyd has joined the expedition in his place. The work is entirely new to him, but if first impressions are to be accepted he should prove a success. Work was in full swing at the time of going to press, but doubtless will have been closed down before this is in the hands of our readers.

The harvest of the double excavation season should provide a very satisfactory exhibition in the summer. It has already given us scientific results which more than justify our venture into a new field, the initiation of which was mainly due to the generosity of Mr. Mond.

Miss Calverley has continued the copying of the scenes and inscriptions in the temple of Seti I at Abydos. She has spent some months on this work in Egypt in addition to

much time devoted to it in England last summer. All who have seen her work are impressed with her skill and accuracy, as well as with her capacity for concentration. It is a lonely task, as she has been the only European on this site, and her sole companion was a Syrian woman who acted as confidential servant and superintended the work of the house and camp. Dr. Alan Gardiner and Dr. de Buck joined her for a short time in January in order to collate some of the most important texts and to supervise the work generally.

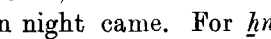
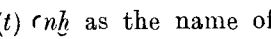


The lectures arranged by the Committee have again been held in the Meeting-room of the Royal Society, a privilege for which the Society is much indebted to the Council. As an experiment, two were given at 5 p.m. instead of at 8.30. The change of time does not appear to have made any material difference in the attendance, and to a considerable extent the audience has been the same at both hours, though doubtless there are a few who find the afternoon more convenient. The first lecture was at 5 p.m. on October 24th by Mr. C. J. Gadd on "Babylonian Seers and their Art." This is the first time that Mr. Gadd has lectured for the Society, and it is sincerely hoped that he will be persuaded to do so again. In November, Dr. H. R. Hall spoke on "Egypt and the External World in the Saite Period," which might almost be regarded as a sequel to the lecture he gave in 1923 on "The World in the time of Tutankhamūn." The remaining lectures of the series—by Professor F. Ll. Griffith on "Nubia, Pagan and Christian" (January), Mr. H. I. Bell on "Egypt under the Caliphs of Damascus" (February), and Mr. H. A. R. Gibb on "The Foreign Policy of Egypt in the Muslim Period" (March)—all broke fresh ground for most of the audience, and it is to be hoped that our interest in Egyptian history has been widened by these scholarly papers.

In the death of Sir C. Hercules Read, F.B.A., we regret the loss of a distinguished connoisseur who was led by his interest in all spheres of art to become a member of the Society and to serve on the Committee for some years. Ill-health prevented him from taking a very active part in the affairs of the Society, but his appreciation of its work was shown by his regular attendance at its exhibitions at Burlington House.

The Metropolitan Museum of Art, New York, has established a new periodical publication of which the first number has just appeared. It is to be published twice yearly and to contain articles dealing with all departments of the Museum. The first number contains no article dealing with the Egyptological section of the Museum, but for the next an article by N. de Garis Davies is promised.

Those who have read the opening section of these Notes will have observed with satisfaction that Mr. Robert Mond's withdrawal from active excavation does not indicate any flagging of his interest in Ancient Egypt. We congratulate him on the success of the excavation at Armant, a site in which he has been a firm believer from the first.

In the tomb of Ramose, which owes its present condition to Mr. Mond's generosity, Mr. W. B. Emery has again been at work copying the scenes, and for a few days he was joined by the Editor of the *Journal*, who is to be responsible for the texts in the publication which Mr. Mond has in preparation. It is hoped that next season may see the accomplishment of the task.

In the Story of the Foredoomed Prince, Papyrus Harris 500, verso page 7, lines 14-15, is a sentence which has been generally rendered "Now when night came the youth went to sleep on his bed." It is probable that this rendering is approximately correct, but the reading on which it has hitherto been based is certainly wrong. Most translators have supposed that the scribe wrote, or at least intended to write, something like . See, for example, Möller, *Hieratische Lesestücke*, Heft II, 23. The correct reading is undoubtedly , as is evident from the facsimile in Pl. li of the recently published *Egyptian Hieratic Papyri*, British Museum, second series, and the meaning is "Now after the end of the twelfth hour of the day," i.e. when night came. For *hnm(t) nh* as the name of the twelfth hour, see Brugsch, *Thesaurus*, 844, and *Wörterb. Suppl.* 941. The stroke after  stands for , as commonly in later cursive hieratic.

A. M. B.

A. M. B.
T. E. P.

Professor Spiegelberg writes as follows:

"Three other Mnevis scarabs, among them a heart-scarab, came to light in April 1902 in the same region in a Mnevis tomb of the reign of Ramesses VII (*sic*) (*Rec. trav.*, xxv, 35)."

Professor Alan Gardiner has recently received honours from two foreign learned societies. He has been elected a corresponding member of the Munich (Bavarian) Academy of Sciences and a member of the Committee of the French Egyptological Society.

BIBLIOGRAPHY: GRAECO-ROMAN EGYPT

A. PAPYRI (1927-1928)

[The work on this bibliography has been divided as follows: § 1, H. J. M. MILNE, British Museum; § 2, A. D. NOCK, Clare College, Cambridge; § 3, H. I. BELL, British Museum; §§ 4 and 5, Ptolemaic and Byzantine periods, J. G. MILNE, 20 Bardwell Road, Oxford; Byzantine and Arab periods, N. H. BAYNES, Fitzwalters, Northwood, Middlesex; § 6, F. DE ZULUETA, 37 Norham Road, Oxford; § 7, Miss M. E. DICKER, 16 Elsham Road, London, W. 14; § 8, R. MCKENZIE, St John's College, Oxford; §§ 9 and 10, H. I. BELL. The reading of the necessary periodicals is divided between the various contributors.

In general, articles in such publications as PACLY-WISSOWA-KROLL are not noticed; and for the most part reviews are included only if they contribute something to the subject concerned or express a reasoned criticism of the work under notice.

One of the contributors has suggested that it may be of service both to the writers (in the interests of uniformity in usage) and to readers to specify the less obvious abbreviations used in citing periodicals. The principal ones are: *Am. Hist. Rev.* = *American Historical Review*; *A.J.A.* = *American Journal of Archaeology*; *Am. Journ. Phil.* = *American Journal of Philology*; *Anc. Egypt* = *Ancient Egypt*; *Archiv* = *Archiv für Papyrusforschung*; *Arch. f. Rel.* = *Archiv für Religionswissenschaft*; *Boll. Fil. Class.* = *Bollettino di filologia classica*; *Bull. Bibl. et Ped.* = *Bulletin bibliographique et pédagogique du Musée belge*; *Bull. Soc. Arch. d'Alex.* = *Bulletin de la Société Royale d'Archéologie d'Alexandrie*; *B.Z.* = *Byzantinische Zeitschrift*; *C.-R. Ac. Inscr. et B.-L.* = *Comptes-Rendus de l'Académie des Inscriptions et Belles-Lettres*; *Cl. Phil.* = *Classical Philology*; *Cl. Quart.* = *Classical Quarterly*; *Cl. Rev.* = *Classical Review*; *Cl. Weekly* = *Classical Weekly*; *D. Lit.-Z.* = *Deutsche Literaturzeitung*; *G.G.A.* = *Göttingische Gelehrte Anzeigen*; *Hist. Z.* = *Historische Zeitschrift*; *J.H.S.* = *Journal of Hellenic Studies*; *J.R.S.* = *Journal of Roman Studies*; *Journal* = *Journal of Egyptian Archaeology*; *Journ. Sav.* = *Journal des Savants*; *O.L.Z.* = *Orientalistische Literatur-Zeitung*; *Phil. Woch.* = *Philologische Wochenschrift*; *Rech. sc. relig.* = *Recherches de science religieuse*; *Rev. Arch.* = *Revue archéologique*; *Rev. belge* = *Revue belge de philologie et d'histoire*; *Rev. de Phil.* = *Revue de philologie*; *Rev. d'hist. eccl.* = *Revue d'histoire ecclésiastique*; *Rev. ét. anc.* = *Revue des études anciennes*; *Rev. ét. gr.* = *Revue des études grecques*; *Rev. hist. dr. fr. et étr.* = *Revue de l'histoire du droit français et étranger*; *Rhein. Mus.* = *Rheinisches Museum für Philologie*; *Riv. di Fil.* = *Rivista di filologia classica*; *Sitz.-Ber....* = *Sitzungsberichte...*; *Symb. Oslo.* = *Symbolae Osloenses*; *Theol. Lit.-Z.* = *Theologische Literaturzeitung*; *Z. f. Kirchengesch.* = *Zeitschrift für Kirchengeschichte*; *Z. f. Numism.* = *Zeitschrift für Numismatik*; *Z. neut. Wiss.* = *Zeitschrift für neutestamentliche Wissenschaft*; *Z. Sac.-Stift.* = *Zeitschrift der Savigny-Stiftung*.

H. I. B.]

1. LITERARY TEXTS.

General. Study of P. Oxy. xvii has naturally been prominent in last year's activities. The new *Callimachus* comes in for most attention, and the results must be sought in this section under *Elegiac*. More general reviews will be found in *The Times Lit. Suppl.*, 15 Mar. 1928, 156; in *Biblyografya* (Polish), 1928, 305-9, by MANTEUFFEL; in *Cl. Rev.*, XLII, 131-3, by C. M. BOWRA, who reviews it along with MILNE's *Cat. of Literary Papyri in the British Museum*.

This latter work is reviewed also by SCHUBART in *Gnomon*, IV, 395-402, who makes important suggestions for nos. 51, 52, 226, 227. No. 52 (the new Mime) is elaborately annotated, especially from a metrical standpoint, with reference to similar lyrics, both from papyri and inscriptions, by CRÖNERT in *Philologus*, LXXXIV, 157-70. He appends also suggestions on the Phaethon lament (no. 51). E. WÜST, *ibid.*, 153-7, gives an erroneous arrangement of no. 52. Other reviews or notices are by M. HOMBERT in *Rev. Belge*, 1928, 1051-2; M. CROISSET in *Journ. Sav.*, 1928, 297-8; W. MOREL in *Phil. Woch.*, 1929, 132-7, with restorations; J. SYKUTRIS in *D. Lit.-Z.*, 1928, 1507-9, who identifies the hymns, nos. 237, 244, and regards no. 138 as a *διαίρεσις ζητημάτων*, like the work of Sopater, but important as being pre-Hermo-

genic; B. A. VAN GRONINGEN, with emendations, in *Museum*, xxxvi, 89, 90; P. COLLART in *Rev. de Phil.*, 1928, 378. Note, in no. 193, l. 46, $\chi\upsilon$ should be $\epsilon\upsilon$. In no. 181, 3-5, Ajax, etc. looks like a shorthand tetrad, cf. *Archiv*, viii, 46. Perhaps connected as being names of woe? Τέκμησσα from τήκομαι?

Les Papyrus Bouriant is reviewed by A. D. NOCK in *Cl. Rev.*, xlii, 149; by SCHUBART in *Gnomon*, iv, 222-4; and by K. F. W. SCHMIDT in *G.G.A.*, 1928, 145-82 (very important).

A second series of *New Chapters in Greek Literature*, by BARBER and POWELL, has just appeared, but too late for more than mention at the moment.

A note on Herculean papyri is contributed by V. DE FALCO to *Riv. Indo-Grec.-Ital.*, xii, 99-102, dealing with remains of umbilici in wood and compressed papyrus, and of cornua.

Epic. An important article by G. M. BOLLING in *Journal*, xiv, 78-81, discusses and restores the new Ptolemaic fragments of *Il.* xii, 128-263 (B.M. Lit. Pap. 251). He relates them to the "City" editions.

In *Symbolae Osloenses*, vi, 55-6, G. RUDBERG edits a fragment (no. 387) with *Od.* iv, 483-91, and *ibid.*, 57-9, CRÖNERT publishes a fragment of *Sibylline Oracles*. Both articles have plates.

A fragment of 15 hexameters from a 4th-5th cent. vellum leaf is published in *Bull. Soc. Arch. d'Alex.*, vi, 294-5. Beg. αὐτὰρ ὅτε κλύε μῖθον ἀπηνέα δ[]. Restored by CRÖNERT in *Riv. di Fil.*, vi, 507-8, as a fragment of the Hesiodic *Catalogue*.

P. Oxy. xvii, 2075 is the subject of an article by T. W. ALLEN in *Cl. Quart.*, xxii, 73-6, entitled *Onomacritus and Hesiod*. First Hesiodic text with critical signs. Lines 16-23 forged by Onomacritus. ALLEN also discusses the Ptolemaic *Iliad* above.

In *Cl. Quart.*, xxiii, 29-30, ALLEN restores and discusses the prose argument to the *Iliad* in P. Brit. Mus. Lit. 6, cols. 21, 22.

Lyric. Remains, perhaps of 79 hexameters, of *Erinna* from a 1st cent. B.C. papyrus discovered at Oxyrhynchus are published by G. VITELLI in *Bull. Soc. Arch. d'Alex.*, no. 24, 9-16, from the lament of Erinna for Baucis—*Frammenti della "Conocchia" di Erinna*. The poem was entitled *The Spindle*.

An article by G. COPPOLA in *Atene e Roma*, viii, 193-217, gives an interesting account of Alcaeus with numerous references to papyri. The ode Ὅς λόγος κακῶν is treated by Q. CATAUDELLA, *ibid.*, ix, 81-5.

LOBEL's *Alcaeus* has several important reviews, viz.: C. M. BOWRA in *Cl. Rev.*, xlii, 23-5; E. DIEHL in *Phil. Woch.*, 1928, 753-7; H. FRANKEL in *G.G.A.*, 1928, 257-78 (along with LOBEL's *Sappho* and EDMONDS' *Lyra Graeca*); C. R. H. in *J.H.S.*, xlviii, 101-2.

The literature on *Pindar* (1903-27) and *Bacchylides* (since 1908) is brought together by L. BORNEMANN in *Bursians Jahresbericht*, 1928, 131-86.

W. E. J. KUIPER writes *De Bacchylidis Carmine xviii*, in *Mnemosyne*, lvi, 55-9. At l. 15 reads τί ἦν and puts the whole of this strophe into the mouth of the chorus. Reads $\tau\iota$ καινόν at l. 9.

Elegiac. The discussion of the new *Callimachus* is already extensive. Criticism centres round two chief points of the so-called prologue (P. Oxy. 2079), its date and its purpose. PFEIFFER in *Hermes*, lxxiii, 302-41, makes many important restorations, thinks it is a late poem (he entitles his article, *Ein neues Altersgedicht des K.*), and regards it as an introduction to a late edition of the *Αἴτια*. C. CESSI, writing in *Aegyptus*, ix, 97-105, does not think it is late. VOGLIANO in *Boll. Fil. Class.*, xxxiv, 201-11, takes it to be the prologue to a collection of Elegies rather than to the *Αἴτια*. P. MAAS in *D. Lit.-Z.*, 1928, 128-31, makes similar speculations. Thinks perhaps the elegy is complete at the beginning. An important article by ROSTAGNI in *Riv. di Fil.*, vi (N.S.), 1-52, makes striking restorations and interpretations with the aid of B.M. Lit. Pap. 181. J. T. KAKRIDIS in *Phil. Woch.*, 1928, 1214-15, makes several restorations from *Anth. Pal.*, xi, 321, and HUNT in *Cl. Rev.*, xlii, 6, restores l. 35: [$\alpha\upsilon\theta\iota$ τ]ὸ δ' [$\epsilon\kappa$]δύοιμι τό μοι. Q. CATAUDELLA in *Riv. di Fil.*, vi, 509-10, points out echoes of the new *Callimachus* in Gregory of Nazianzus.

The second new poem (P. Oxy. 2080) is the subject of an article by G. DE SANCTIS in *Atti Acc. Scienze Torino*, lxxiii, 112-17, called *Callimaco e Messina*. He identifies *Δρέπανον* (l. 71) with Messina.

A useful discovery is published by VITELLI in *Bull. Soc. Arch. d'Alex.*, no. 24, 1-4, namely 2nd cent. scholia to the opening lines of the *Iambi* of Callimachus, making possible several restorations in P. Oxy. 1011, ll. 97-109. Found at Behneseh (Oxyrhynchus).

An interesting interpretation of a well-known line in the *Iambi* is proposed by W. SCHMID in *Phil. Woch.*, 1928, 1598-9, reading *πάμμεσον δινεῖν* = "to twiddle the 4th (i.e. ring-)finger," of an idler. *Anglice*, "to kick one's heels."

Minor restorations in Callimachus are published by VITELLI in *Bull. Soc. Arch. d'Alex.*, vi, 301-2, where he sponsors Diel's proposal of ἀν' ἐρ(ε)ῶς in P. Oxy. 1011. 39. Thinks πεφός in the last line of the *Αἴτια* means "prose."

In *Il Marzocco*, 3 Feb. 1929, VITELLI announces the approaching publication (in vol. IX of P.S.I.) of 10 more or less complete lines and other fragments of the *Coma Berenices* corresponding to Catullus, 45-64. Actually 20 lines, now published by VITELLI in *Studi ital. di Fil. Class.*, N.S., VII, 3-12.

POWELL in *Cl. Quart.*, XXII, 113, reads *κερανο* in B.M. Lit. Pap. 181. 40, comparing *Coll. Alexandrina*, p. 84, col. vi, l. 9.

Solon fragments from the 'ΑΘ. ΠΟΛ. are emended by K. ZIEGLER in *Phil. Woch.*, 1928, 507-9.

The Budé *Aesop* is reviewed by W. G. WADDELL in *Cl. Rev.*, XLII, 240. It makes use of the Golenischev papyrus.

Fragments of a 2nd cent. monograph on Gnostic literature are published by VITELLI in *Bull. Soc. Arch. d'Alex.*, no. 24, 4-8. Hermippus is the latest author quoted.

The meaning of *μελίχλωρος* (poetic for *μελίχρως*) in Theocritus, x, 26-7, is explained by M. E. DICKER in *Cl. Rev.*, XLII, 170, from the terminology of personal identification in papyri.

Drumt. A. E. HOUSMAN suggests restorations for P. Oxy. xvii, 2078, the Pirithous drama, in *Cl. Rev.*, XLII, 9.

In an appreciative review of the Budé *Euripides*, vol. II, in *Phil. Woch.*, 1928, 1329-34, W. MOREL has some remarks on papyrus fragments of the plays.

Y. TOBIAS has published for her doctoral thesis in Brussels an *Édition critique et commentée, accompagnée d'une traduction, de l'Hyppsiyle d'Euripide*.

In *Rev. Belge*, XXXII, 87-90, G. MÉAUTIS finds a quotation of *Od.* XII, 432, in P.S.I. 724, and regards that papyrus as from a commentary on the *Teucer* of Sophocles. In P.S.I. 143, he thinks Agriculture is personified, comparing Aristophanes, fr. 294 (Kock).

M. O. GUÉRAUD, after a fresh examination of the *Menander* codex, cautions in *Bull. Instit. Fr. d'Arch. Orient.*, XXVII, 127-57, against too much confidence in new readings and restorations, with reference to JENSEN and others. Some remarks also on the plot of the *Perikeiromene*.

The Budé *Herodas* by NAIRN and LALOY has appeared. Severely reviewed by KNOX in *Cl. Rev.*, XLIII, 24-5. A few corrections have been published simultaneously by MAZON in *Rev. de Phil.*, 1928, 101-5, the most important being on Mime IV, 88-95.

A. D. KNOX illustrates from Demosthenes the meaning of Herodas, II, 6-8, in *Cl. Rev.*, XLII, 163-5. Equates *ῥμαστος* with *ῥμόπτολις* and translates, "If Kos be a land of cities united in one city." Also discusses v, 67-8, and iv, 46, in *Cl. Rev.*, XLIII, 8-10.

A very ungentlemanly *Hipponax* fragment (15 lines, about two-thirds of each line) from Oxyrhynchus is published by COPPOLA in *Riv. di Fil.*, 1928, 500-6.

Grammar. LOBEL solves a crux in *Apollonius Dyscolus* from P. Oxy. 2080, l. 76, in *Cl. Quart.*, XXII, 115-16. Read *ἀλλήλους δ' ἐλύσαν*.

In B.M. Lit. Pap. 183, ascribed to *Phrynichus*, I now read, ll. 38-9, [ἐσ-]ρω, not [οῦ-]ρω.

History. A. H. SALONIUS edits Berl. Pap. 13236, a 2nd-3rd cent. fragment of Thucydides, II, 65-82, in *Soc. Scient. Fennica, Comm. Hum. Litt.*, II, 2, Helsingfors. Reviewed by S. P. WIDMANN in *Phil. Woch.*, 1928, 945-7. In *Symb. Oslo*, VII, 92-3, S. P. THOMAS protests, with instances, against the overestimation of P. Oxy. 1376.

On the other hand, in *Cl. Quart.*, XXIII, 11-14, POWELL points out coincidences between P. Oxy. 1376, 696, etc., and the excellent MS., now vanished, used by the humanist Valla for his Latin translation of Thucydides in 1452. An important article.

G. DE SANCTIS in an article *Lacare*, in *Riv. di Fil.*, VI (N.S.), 53-77, attributes P. Oxy. 2082 to Eratosthenes, *Ὀλυμπιονίκαι*, rather than to Phlegon, as HUNT proposed.

In *Athenaeum* (Pavia), VI, 125-56, G. PERROTTA discusses P. Oxy. 1241 and the succession of the Alexandrian librarians.

KALINKA's edition (Teubner) of the *Hell. Oxyrhynchia* is reviewed by L. CASTIGLIONI in *Gnomon*, IV, 18-21; K. MUNSCHER in *Phil. Woch.*, 1928, 913-18; *Cl. Phil.*, XXIII, 202-3; CALDERINI in *Aegyptus*, VIII, 379.

The new Teubner edition of the *Ἀθηναίων Πολιτεία* has appeared, edited by OPPENHEIM. Important review by A. W. GOMME in *Cl. Rev.*, XLII, 224-6.

M. A. LEVI writes on "Servio Tullio nel P. Oxy. 2088," in *Riv. di Fil.*, VI, 511-15.

Law. The new *Gaius* (P. Oxy. 2103) is the subject of an important article by ZULUETA in the *Law Quarterly Rev.*, Apr. 1928, 1-11.

P. M. MEYER identifies the "Letter of Severus Alexander" (P. Oxy. 2104) as *Digest*, XLIX, 1, 25, in

Studi in onore di P. Bonfante, II, 341-4. Identified independently in *Archiv*, IX, 90, by WILCKEN, who gives the text.

Music. In *Riv. Indo-Grec-Ital.*, XI, 101-5, C. DEL GRANDE relates, in parallel columns, P. Oxy. 667 to the *Elementa* of Aristoxenus and the *Isagoge* of Cleonides.

Orators. A new speech by Lysias, Ὑπὲρ Ἐρυξιμάχου μέλιναντος ἐν ᾧσται, from Oxyrhynchus is published by MILNE from a 4th cent. Brit. Mus. Pap., no. 2852, in the present issue of the *Journal*. The opening lines and title are preserved, as well as a few line-ends from the extant oration no. i.

In *Rev. ét. anc.*, XXX, 189-200, G. COLIN uses a reading of JENSEN's in the *Contra Demosth.* of Hyperides to prove that Lycurgus was made head of finance after Chaeronea, with the title of ταμίης (ἐπὶ τῇ διοίκησιν).

J. KEIL in *Archiv*, IX, 61, identifies P.S.I. 762, from a 4th cent. vellum codex, as part of Isocrates, *Panegyricus*, 78-82. Notes an agreement with Urbinas, another with Vat. 65. The same identification was made by HEICHELHEIM in *Hermes*, LX, 372, and a new transcript is given in *Bull. Soc. Arch. d'Alex.*, VI, 295-6.

LAISTNER's edition of Isocrates, *De Pace* and *Philippus*, is noticed by P. COLLART in *Rev. de Phil.*, 1928, 288. Improvements introduced from Brit. Mus. P. 132.

A work *De sermone Hyperidis*, published at Lwow by D. GROMKA, examines elaborately the non-literary forms and usages of H., and the connection of his vocabulary with the colloquial language of his day and with the κοινή (so I learn from *J.H.S.*, XLVIII, 282). A similar work, *Die Sprache des Redners Hyperides in ihren Beziehungen zur Koine* by ULRICH POHLE, is reviewed by J. F. DOBSON in *Cl. Rev.*, XLIII, 21-2.

Philosophy. A. VOGLIANO in *Archiv*, IX, 1-4, recognises quotations from Epicurus in P. Herc. 168—*Ein neues Fragment von Epikur*.

A new work by VOGLIANO, *Nuove lettere di Epicuro e dei suoi scolari* (from P. Herc. 176), is reviewed with many suggestions by R. PHILIPPSON in *Gnomon*, IV, 384-95, and by WILAMOWITZ in *D. Lit.-Z.*, 1928, 1157-8.

S. LURIA in *Cl. Quart.*, XXII, 176-8, gives further readings in P. Oxy. 414, and confirms the attribution to Antiphon.

2. RELIGION, MAGIC, ASTROLOGY.

(Including Texts.)

General. J. LEIPOLDT, *Die Religionen in der Umwelt des Urchristentums* (Lief. 9-11 of H. HAAS, *Bilder-atlas zur Religionsgeschichte*, pp. xxii+193, illustrations on 50 plates), is a convenient collection of much relevant archaeological material; it is commended by L. DEUBNER, *Gnomon*, IV, 436-40 (corrections).

Jahrbuch für Liturgiewissenschaft, VII, has again a good bibliography.

O. WEINREICH has compiled a valuable index to volumes I-XXV of *Arch. f. Rel.* (issued with vol. XXV, Heft 3/4, 1927).

E. FASCHER, ΠΡΟΦΗΤΗΣ, is reviewed by M. DIBELIUS in *Theol. Lit.-Z.*, 1928, 509-10, as is E. PETERSON, ΕΙΣ ΘΕΟΣ, 542-4. The latter is reviewed also by J. COPPENS in *Rev. d'hist. eccl.*, XXIII, 818-21.

K. LATTE, *Die Religion der Römer und der Synkretismus der Kaiserzeit*, is reviewed by FR. PFISTER in *Phil. Woch.*, XLVIII, 1559.

Many relevant texts are discussed in §§ 1 and 3.

Ptolemaic. We may here mention *Expedition Ernst von Sieghin*, I, *Malerei und Plastik, zweiter Teil*, bearbeitet von CARL WATZINGER, 1927 (containing *inter alia* no. 4, Ptolemy I as Pan, "probably posthumous," with discussion of Pan's popularity; pp. 18 ff., pl. viii, a Ptolemy queen perhaps as Isis; p. 22, on religious policy of Ptolemy IV; p. 62, nos. 47-53, Sarapis heads, with notes on this type and on the first Greek representation of Isis in Alexandria, a copy of the Kora of Bryaxis; p. 79, on Greek conception of Isis-Kora and on various Isis types). This handsome work is full of instructive material. *A propos* of Watzinger's discussion of the Sarapis type I may remark that A. W. LAWRENCE, *Later Greek Sculpture* (1927), 107, accepts Clement's statement that the Bryaxis in question was not the Athenian but his homonym who made the Apollo of Daphne, and note L.'s observation (p. 85), one of the few classical objects imported into India is a bronze Harpocrates of Graeco-Egyptian manufacture.

CH. PICARD, *Apollon Bès et les Galates* (*Bull. Mus. d'Art et d'Hist. de Genève*, v, 52-63), known to me from *Rev. ét. anc.*, 1928, 87, explains certain figures of Bès with a Gaulish shield by a double allusion to the defeat of the Gauls before Delphi in 278 and of the revolt against Philadelphus in 276.

A Ptolemaic stele dedicated to the lion god of Leontopolis is published by H. P. BLOK, *Bulletin van de vereeniging tot bevordering der kennis van de antieke beschaving*, II, ii, 10 ff., known to me from *Phil. Woch.*, XLVIII, 1317.

U. WILCKEN, *Archiv*, IX, 75-80, discusses P.S.I. 1014-1025, important Ptolemaic texts from the West side of Thebes throwing light on the *ἡμέραι ἀγνευτικάι* and the profits derived from these ceremonies in the tendance of the dead, under the protection of Aphrodite Hathor. SPIEGELBERG also has written on these texts in his *Demotica*, II (*Sitz.-Ber. Bay. Ak.*, 1928, 2), 24-6. The same work includes (pp. 54-5) a discussion of hereditary priesthoods in Ptolemaic Egypt.

W. S. FERGUSON, *The leading ideas of the new period* (*Camb. Anc. Hist.*, VII, 1-40 and 869-70), is a brilliant survey of the significant movements in thought and belief of the early Hellenistic period, with very good remarks on deification (pp. 13 ff.). In this connexion we may refer to W. W. TARN, *The Hellenistic Ruler-Cult and the Daemon* (*J.H.S.*, XLVIII, 206-19), which substantially disposes of the idea that ruler-worship originates in a supposed Persian cult of the king's *fravashi* (A. S. F. GOW, *ibid.*, 134-6, explains the often quoted line of Aeschylus, rightly, I think), to U. WILCKEN's observation, *Archiv*, IX, 73-4, on new evidence for the view that the Hellenistic form of ruler-worship in Egypt was something foreign to native Egyptians, and to A. D. NOCK, *Notes on Ruler-Cult*, I-IV (*J.H.S.*, XLVIII, 21-43), for Egypt as the home of some Dionysiac mythology, and for *νέος Διόνυσος* and *Ἐπιφανής*. See too the article of E. R. GOODENOUGH mentioned below in § 4, *Political History*.

E. BRIEM, *Zur Frage nach dem Ursprung der hellenistischen Mysterien* (*Lunds Universitets Årsskrift*, N.F., Avd. 1, Bd. 24, Nr. 5, 1928, pp. 68), is a well-documented critical study of the Oriental substratum of the Hellenistic mystery religions and the Greek transformation of that substratum. We may note his suggestion, p. 51, that a small undecorated room in the Iseum at Pompeii was an *Unterreltraum*. BRIEM faces on p. 63 the real problem: why did the Ptolemies choose Osiris-Apis rather than Osiris himself? His answer is that Osiris was too closely bound up with the old Egyptian culture. It may be added that the priesthood of a cult given new meaning and prominence could be expected to give more enthusiastic support to the dynasty than the priests of Osiris would provide.

R. REITZENSTEIN, *Hellenistische Mysterienreligionen*, is reviewed by K. H. E. DE JONG in *Museum*, XXXV, 305-7.

REITZENSTEIN-SCHAEDEER, *Studien zum antiken Synkretismus*, is reviewed by M. DIBELIUS in *Theol. Lit.-Z.*, LIII, 1928, 195-8.

E. BRÜGELMANN, *Hellenistische Mysterienreligionen*, is reviewed by K. PREISENDANZ in *O.L.Z.*, XXXI, 184-6.

M. ZEPF, *Der Gott Αἰών in der hellenistischen Theologie* (*Arch. f. Rel.*, XXV, 225-44), discusses and emphasises the Aristotelian and Stoic components of this puzzling figure and the relations of Greek and Oriental concepts of Time.

W. SPIEGELBERG, in his *Demotische Beiträge* (*Archiv*, IX, 56-60), discusses the title "priest of the dead Apis children" in the Serapeum of Memphis (its holders were concerned with the dead offspring of the sacred animal) and proper names Ἀφώνρεϋς, Ἀφώντισσα which are transcriptions of a Demotic name. In his *Neue Urkunden zum ägyptischen Tierkultus* (*Sitz.-Ber. d. Bay. Ak.*, 1928, 3, pp. 18, 3 plates) he edits *inter alia* a Ptolemaic text of some length.

K. KERÉNYI, *Die griechisch-orientalische Romanliteratur in religionsgeschichtlicher Beleuchtung. Ein Versuch* (Tübingen, Mohr, 1927. Pp. xvi+275. 16 M. 50), urges in a most learned and ingenious work that an Egyptian *ἱερός λόγος* underlies the Greek novel and the Clementine romance. His main conclusions are received with scepticism by K. HELM in *Phil. Woch.*, XLVIII, 1475-81, D. S. ROBERTSON in *Cl. Rev.*, XLII, 230-2, and A. D. NOCK in *Gnomon*, IV, 485-92, who agree in praising K.'s erudition and industry.

HOPPE's early date of Hero (mentioned *Journal*, XIV, 135) is opposed by J. HAMMER-JENSEN, *Die Heronische Frage* (*Hermes*, LXIII, 34-47).

H. SEYRIG, in his *Quatre cultes de Thasos* (*Bull. Corr. Hell.*, LI, 178-233), publishes, pp. 219 ff., an inscription relating to the sale of the *ἐπωρυπία* of the Sarapiastae with full and instructive comment. In a *note additionnelle* (*ibid.*, 369-73) he mentions a Thasian bas-relief showing an emblem of Isis in a funerary banquet.

A. SALAČ, in his *Inscriptions de Kyme d'Éolide, de Phocée de Tralles* (*ibid.*, 374-400), publishes, pp. 378 ff., a *hymne isiaque* from Kyme which is substantially equivalent to the earlier known Ios text, with an introductory statement that Demetrius of Magnesia had put it up as an *ex voto* and that it was a copy of the stele near the Hephaistieion (temple of Ptah) at Memphis. The Euhemeristic version in Diodorus, presumably taken from Hecataeus, is, as Salač says, an adaptation of what is therefore a very early Hellenistic text, un-Greek in its complete and shapeless asyndeton. Salač publishes also dedications to Isis, and Isis and Osiris, and an *ushabti* figure found at Kyme.

H. HERTER in the course of his valuable article *De Martino Tütino* (*Rhein. Mus.*, LXXVI, 418-32) argues that the cult of Priapus came from Alexandria to Italy: this is indeed possible, but one may also ask whether we have not to deal rather with the identification by scholars in Italy of an older Italian figure with Priapus than with an incoming cultus.

S. FERRI's discussion in *Studi e materiali di storia delle religioni*, III, 235 ff., of a βόθρος found in the Telesterion of Isis at Cyrene is known to me only from S. EITREM's reference to it in *Symb. Oslo.*, VI, 54.

O. GUÉRAUD, *Quelques textes du musée du Caire* (*Bull. Inst. Fr. d'Arch. Or.*, XXVII, 113-25), includes, pp. 121-5, an inscription in honour of Amenothos (3rd-2nd cent. B.C.) by a patient.

Imperiol. P.S.I. 1039 is a return in the 3rd cent. A.D. by a ἱεροψάλτης Ἀμμωνος καὶ Κρόνου καὶ Ἡρας καὶ Ἡρακλέως καὶ Σαράπιδος καὶ τῶν συννάων θεῶν to the ἀρχιεπιστολήτης καὶ πρωτοστολιστής of Oxyrhynchus and refers to something written by Aurelius Timagenes, high priest for life, a previously unknown high priest of Egypt. P.S.I. 1004 refers to a temple of Suchos at Philadelphia (cf. *Archiv.*, IX, 74).

P. Oxy. 2105, an edict of the prefect Petronius Honoratus, gives the tantalising fragment μ[ενος τριετηρικὸς ἀγών] |] ἐπὶ τιμῇ θεῶν Λιβίας κα[λ]. WILCKEN, *Archiv.*, IX, 92-3, remarks that this is based on a Greek deification of Livia as θεὰ Λιβία, not on the Roman form, *diua Augusta*. P. Oxy. 2131 mentions the Ἀντινόειον at Antinoöpolis for the first time: it belongs to the Greek cult of θεὸς Ἀντίνοος, not to the Egyptian cult of him as Ὁσιπαντίνοος.

The late F. W. KELSEY's *Fouilles américaines à Kom Ousim (Fayoum)* (*C.-R. Ac. Inscr. et B.-L.*, 1927, 81-90) gives an account of these important excavations and describes three remarkable religious paintings from niches in houses, assigned to the 3rd cent. A.D., of Isis and Harpocrates, of the rider-god, and of a possibly Mithraic subject.

G. VON MANTEUFFEL has published *Quelques notes sur le Pap. Oxy. xi, 1380* (*Rev. de Phil.*, 3 S., II, 161-7), giving valuable new readings from the original (FR. CUMONT, *Syria*, VIII, 368, illustrates l. 76, Isis as μεγάλη in Arabia). MANTEUFFEL has produced also *Studia papyrologica* (*Eos*, XXXI, 181-94), in which he deals in an interesting way with a poem from Talmis recording the vision of one Maximus, published by MAHAFFY and BURY in *Bull. Corr. Hell.*, 1894, 141 ff. and KAIBEL in *Sitz.-Ber. preuss. Ak.*, 1895, 781-9, with the queer Sarapis wonder-story published by ABT, *Arch. f. Rel.*, XVIII, 257 (M. has many new readings), and with P. Oxy. 1381.

W. NESTLE, *Zu dem Berliner orphischen Papyrus* (*Phil. Woch.*, 1928, 220-1), draws attention to a parallel in KERN, *Orphica*, 37, test. 121 to P. Berol. 13426.

For the diffusion of Graeco-Egyptian religion outside Egypt reference should be made to G. LA PIANA's most valuable monograph, *Foreign groups in Rome during the first centuries of the Empire* (*Harv. Theol. Rev.*, 1927, 183-403), warmly praised by G. FICKER in *Theol. Lit.-Z.*, 1928, 516-17. A. MAIURI in *Notizie degli scavi*, Serie Sesta, vol. III, 53-4, Tav. VII, 1, publishes a wall painting from the Casa dell' Efebo at Pompeii showing a shrine of Isis Fortuna with its precinct: some of the details deserve further study. Another picture from the same room shows in a rustic scene the golden image of Apis on a high basis. M. DELLA CORTE, in the same volume of *Notizie*, pp. 112-14, fig. 10, publishes a fine wall painting of a priest of Isis with the inscription AMPLVS ALVMNVS TIBVRS; for *alumnus Tiburs* cf. *Thes. l. L.*, I, 1797, 12-14.

K. HORNA, *Die Hymnen des Mesomedes* (*Sitz.-Ber. Ak. Wien*, 207 i, 1928, pp. 40), includes, pp. 12 ff., the hymn to Isis and discusses fully the question of the author's identity.

A. D. NOCK, *Religious development from Vespasian to Trajan* (*Theology*, XVI, 152-60), discusses *inter alia* the rise in popularity of Sarapis worship in this period and the propaganda used in its support.

T. GRASSI, *Le Liste templari*, is reviewed by M. HOMBERT in *Rev. Belge*, VI, 795-6.

Magic. The event of the year is the appearance of *Papyri graecae magicae. Die griechischen Zauberpapyri herausgegeben und übersetzt von KARL PREISENDANZ unter Mitarbeit von* †A. ABT, S. EITREM, L. FAHZ, A. JACOBY, †G. MÖLLER, †R. WUNSCH. Vol. I. Pp. xii + 200. 1928. (16 M. unbound, 18 M. bound.) This contains the two Berlin papyri published by Parthey, the great Paris papyrus, the Mimaout papyrus, and P. Lond. 46, edited with introductions and translation and short but comprehensive notes. It is a great convenience to students, and does moreover represent a great advance in knowledge. It is to be hoped that volumes II and III will follow speedily. A brief but enthusiastic review has already been published by FR. PFISTER in *Phil. Woch.*, XLVIII, 1396-7; a general article on it should appear in the next volume of *Journal*.

PREISENDANZ has done another service to scholarship with his article *Die griechischen und lateinischen Zaubertafeln* (*Archiv.*, IX, 119-54), a very full and useful bibliography of magic tablets. On p. 136 a refer-

ence might be added to REITZENSTEIN, *Nachr. Gott. Ges.*, 1904, 319; P.'s *Akephalos* is reviewed by K. H. E. DE JONG in *Museum*, xxxv, 155.

V. MARTIN, *Une tablette magique de la Bibliothèque de Genève* (*Genève*, vi, 56-64, 2 figs. in text), publishes a leaden tablet containing a love charm with interesting features. K. PREISENDANZ comments on this, *Eine neue Zaubertafel*, in *Forschungen und Fortschritte*, iv, 342-3.

L. AMUNDSEN, *Magical text on an Oslo ostrakon* (*Symb. Oslo.*, vii, 36-7), publishes a spell of the second century A.D. intended to part two people; EITREM adds a note.

O. WEINREICH, *Martinol*, xi, 43, *Petron.*, 140. 5, and *Pariser Zauberpapyrus Z. 326* (*Rhein. Mus.*, lxxvii, 112), explains *φύσεως* in P. Par. 326.

E. R. CALEY, *The Leyden Papyrus X* and *The Stockholm Papyrus* (*Journ. of Chemical Educ.*, iii, 1149-66, iv, 979-1002), I know only from *Aegyptus*, ix, 169 (6756).

G. BARDY has written on *Origène et la Magie* (*Rech. sc. relig.*, xviii, 126-42), referring (p. 129) to magical papyri containing Christian names.

S. AGELL'S *Studier i senantik bokstavsmyistik* (*Eranos*, xxvi, 1-51) is reviewed by C. C. UHLENBECK in *Museum*, xxxv, 310.

LEXA, *La Magie*, has been reviewed by H. KEES in *O.L.Z.*, xxxi, 102-4, and K. H. E. DE JONG in *Museum*, xxxv, 303-4. For the Egyptian antecedents reference should perhaps be made to H. O. LANGE, *Der magische Papyrus Harris* (*Det Kgl. Danske Videnskabernes Selskab, Historisk-filologiske Meddelelser*, xiv, 2, 1927, pp. 99, 5 kr. 50). F. J. M. DE WAELE, *The magic staff or rod in Graeco-Italian antiquity*, is reviewed by H. M. R. LEOPOLD in *Museum*, xxxv, 184. L. RADERMACHER, *Griechische Quellen zur Faustsage* (*Sitz.-Ber. Wien. Akad.*, ccvi, 4, 1927, pp. 277), edits some hagiographic texts of interest to the student of ancient magic.

Articles in encyclopaedias are not in general mentioned in this bibliography; but attention must be called to TH. HOPFNER'S full and admirable *Μαγεία* in PAULY-WISSOWA, xiv, 301-93, and to the valuable comparative material afforded by the *Handwörterbuch des deutschen Aberglaubens herausgegeben unter besonderer Mitwirkung von E. HOFFMANN-KRAYER und Mitarbeit zahlreicher Fachgenossen von HANNS BACHTOLD-STAUHLI* (1927-), which includes many articles by FR. PFISTER.

S. EITREM, *Der Skorpion in Mythologie und Religionsgeschichte* (*Symb. Oslo.*, vii, 53-82), illustrates incidentally some recipes in papyri and amulets in a most interesting way. His work, *Les papyrus magiques de Paris* is appreciatively reviewed by P. THOMSEN in *Phil. Woch.*, xlviii, 565-6, his *P. Oslo.*, i, by K. F. W. SCHMIDT in *G.G.A.*, 1927, 463-9, and A. BOULANGER in *Rev. hist. rel.*, xciii, 321-2.

A. JACOBY, *Der angebliche Eselskult der Juden und Christen* (*Arch. f. Rel.*, xxv, 265-82), explains the legend from a satirical etymology for Iao: hence the identification with Seth, of which we have indications in magical papyri and elsewhere. J. interprets some very difficult texts from them.

Hermetica. SCOTT, *Hermetica*, iii, is reviewed by RIESS in *Am. Journ. Phil.*, xlviii, 191. R. BULTMANN'S paper, *Untersuchungen zur Johannesevangelium*, i (*Z. neut. Wiss.*, xxvii, 113-63), is of interest in this connexion, being a discussion of the concept of *ἀληθεία*. BULTMANN contrasts the O.T. idea, the Greek philosophic idea, and the syncretic idea, and handles Hermetic references to the topic, pp. 153 ff. Perhaps the Egyptian deification of Truth should be considered in this context.

A. D. NOCK, *Hermetica* (*Journ. Theol. Stud.*, xxix, 41-3), handles three passages of the *Corpus*.

J. RUSKA, *Tabula Smaragdina, ein Beitrag zur Geschichte der hermetischen Literatur*, is reviewed by J. BIDEZ in *Rev. Belge*, vii, 280 ff., and by J. A. VOLLGRAFF in *Museum*, xxxv, no. 5 (Feb. 1928), 129-30.

Volumes v and vi of the *Catalogue des manuscrits alchimiques grecs* have appeared, v being edited by ZURETTI and SEVERYNS, vi by BIDEZ. vi must be mentioned specially here as containing an unpublished testimonium on a Hermetic work on alchemy (p. 44), the *editio princeps* of Proclus, Περὶ τῆς καθ' Ἑλλήνας ἱερατικῆς τέχνης (pp. 139-51), and some valuable *inedita* of Psellus, including a loose citation of *C. H.* xi. These volumes are warmly praised by FR. PFISTER in *Phil. Woch.*, xlviii, 1334-8, as was vol. ii in *ibid.*, 16-17.

Christianity. A. H. SALONIUS, *Die griechischen Handschriftenfragmente des Neuen Testaments*, is commended by P. THOMSEN in *Phil. Woch.*, 1928, 721-2.

P. GLAUE, *Ein Bruchstück des Origenes über Genesis 1, 28* (*P. bibl. unic. Giss. 17*), Giessen, Töpelmann, 1928, pp. 35, 1 Taf., being Heft i, pt. ii of *Mitteilungen aus der Papyrussammlung der Giessener Universitätsbibliothek*, is reviewed by P. KOETSCHAU in *Z. f. Kirchengesch.*, N.F., x, 429-30.

H. A. SANDERS-C. SCHMIDT, *Minor Prophets*, is reviewed by F. G. KENYON in *Journal*, xiv, 329-30, A. CALDERINI in *Aegyptus*, ix, 164-5, P. THOMSEN in *Phil. Woch.*, xlviii, 1185-7, D. W. RIDDLE in *Journal of Religion*, viii, 626-7. EVELYN-WHITE-CRUM'S *Monastery of Epiphanius*, is reviewed by C. SCHMIDT in

D. Lit.-Z., 1928, 1701-10, A. CALDERINI in *Aegyptus*, IX, 154-5, A. VAN LAUTSCHOOT in *Rec. d'hist. eccl.*, XXIV, 143-8, and E[v.] B[RECCIA] in *Bull. Soc. Arch. d'Alex.*, no. 23, 405-7, and together with *Monasteries of the Wadi'n Natrun*, by J. LEIPOLDT in *Theol. Lit.-Z.*, 1928, 449-50. C. SCHMIDT's translation of *Pistis Sophia* is reviewed by A. VITTI in *Biblica*, IX, 108-10, U. MONNERET DE VILLARD's *Il Monastero di S. Simeone* by A. CALDERINI in *Aegyptus*, VIII, 376-7, CRUM's *Die koptische Übersetzung des Lebens Symeons des Styliten* by P. P[ETTERS] in *Anal. Bolland.*, XLVI, 182-3, and HENDRIX, *De Alexandrijnsche Haeresiarch Basilides*, by J. H. VAN HAERINGEN in *Tijdschrift voor Geschiedenis*, XLIII, 192-4. VITELLI publishes in *Bull. Soc. Arch. d'Alex.*, no. 23, 200 f., a fragment of a Christian amulet as no. 22 of his *Noterelle papirologiche*. This publication, like C. DEL GRANDE, *Liturgie preces hymni Christianorum e papyris collecti* (Ardea, Neapoli, 1928, pp. 39), is inaccessible to me. Of the latter there is a severe and instructive review by J. KROLL in *Gnomon*, v, 30-5. M. J. LAGRANGE, *Un nouveau papyrus contenant un fragment des Actes* (*Rev. Bibl.*, 1927, 549-60), discusses the Sanders fragment.

M. ANDRIEU-P. COLLOMP, *Fragments sur papyrus de l'anaphore de Saint Marc* (*Rev. Sc. Rel.*, VIII, 489-515), give the text of P. Strasb. Gr. 254, with photographs and comments.

F. CABROL, *La doxologie dans la prière chrétienne des premiers siècles* (*Rech. sc. rel.*, XVIII, 9-30), has a reference (p. 29) to an Oxyrhynchus doxology.

LIEZTMANN, *Messe und Herrenmahl*, is well discussed by LEBRETON in *Rech. sc. rel.*, XVII, 324 ff.

L. CERFAUX, *Le vrai prophète des Clémentines* (*Rech. sc. rel.*, XVIII, 143-63), considers the influence of Alexandria upon Judeo-Christians. F. ANDRES, *Die Engel- und Dämonenlehre des Klemens von Alexandrien* (*Rom. Quartalschr.*, XLIII, 13-27, 129-40, 307-29), W. FOERSTER, *Von Valentin zu Herakleon. Untersuchungen über die Quellen und die Entwicklung der valentinischen Gnosis* (*Beih. zum Z. neut. Wiss.*, 7, 1928, Pp. 116. Of some interest for Hermetic studies), and G. BARDY, *La vie chrétienne aux II [qu. III] et IV siècles d'après les papyrus* (*Rev. Apolog.*, XLII, 643-51, 707-21; cited after *Aegyptus*, IX, 174, no. 6857), may be mentioned.

U. WILCKEN in the course of his *Zur Geschichte des Usurpators Achilleus* (*Sitz.-Ber. Preuss. Ak.*, 1927, 270-6) mentions, p. 276, Christianity of Paniskos and his wife as shown in their prayers to $\kappa\rho\upsilon\varsigma\ \theta\epsilon\acute{o}\varsigma$: P.'s $\pi\alpha\tau\acute{\epsilon}\rho\ \tau\omicron\iota\varsigma\ \theta\epsilon\acute{o}\iota\varsigma\ \pi\acute{\alpha}\tau\epsilon\rho\iota$ (I, 6) and $\tau\omicron\iota\varsigma\ \theta\epsilon\acute{o}\iota\varsigma\ \epsilon\ddot{\upsilon}\chi\epsilon\tau[ε]$ (-αι) may well be explained (though W. doubts this somewhat) as the simple retention of conventional phrases: cf. *Cl. Rec.*, 1925, 206 f., for parallels in Latin epigraphy.

R. P. CASEY, *The Text of the Anti-Monichæan fragments of Titus of Bostra and Serapion of Thmuis* (*Harv. Theol. Rev.*, XXI, 97-111), records a valuable discovery on Athos of a manuscript of Serapion and Titus, and shows the principles on which the two texts should be edited. We look forward eagerly to the promised edition of the Greek text and Syriac version by F. C. BURKITT and CASEY.

W. H. P. HATCH, *The Apostles in the New Testament and in the ecclesiastical tradition of Egypt* (*Harv. Theol. Rev.*, XXI, 147-61), treats extra-canonical lists of the Apostles, notably the *Epistula Apostolorum* (according to H. probably composed in Egypt before 180), in which Peter and Cephas are distinguished, other variations of name occur, and the Apostles are thought of as a sacred college rather than as individuals.

G. KLAMETH, *Über die Herkunft der apokryphen "Geschichte Josephs des Zimmermanns"* (ΑΓΓΕΛΟΣ, III, 6-31), studies the *Historia Josephi fabri lignarii* known in Bohairic, Sahidic, and Arabic versions, shows the Egyptian Gnostic character of part of it, producing striking parallels from *Pistis Sophia*, and urges that it is based on the Osiris story. It certainly is in close relation to native funerary customs and ideas: and the body of the patriarch Joseph, from whom features are borrowed, was according to a Jewish legend, with features markedly suggestive of Osiris, put by the Egyptians in the Nile (G. KITTEL, *Die Probleme des palästinischen Spätjudentums und das Urchristentum*, 169 ff.).

3. PUBLICATIONS OF NON-LITERARY TEXTS.

(N.B. Miscellaneous notes on and corrections of documents previously published are referred to in § 9.

Reviews, but only the more important, are noticed here.)

General. During the year under review a new part of that invaluable publication *S.-B.* has appeared, edited as before by F. BILABEL. As was the case with its predecessors, the contents are very various and arranged without classification. There are a good many texts of considerable extent and importance, besides quite short inscriptions, some of only a word or two. This part completes vol. III and contains the indexes and addenda. *Sammlung Griechischer Urkunden aus Ägypten*. Berlin and Leipzig, Walter de Gruyter, 1927. Pp. 155-399. Nos. 6825-7269.

P. CORNELL I has been reviewed by A. S. HUNT in *Journal*, xiv, 185; W. OTTO in *Hist. Z.*, cxxxviii, 666-7; G. COPPOLA in *Boll. Fil. Class.*, xxxiv, 166-8; and M. HOMBERT in *Rev. Belge*, vii, 1048-51 (a complete list of contents given).

B.G.U. vii has been reviewed by W. OTTO in *D. Lit.-Z.*, 1928, 1891-6; M. ENGERS in *Museum* (Leiden), xxxvi, 34-6 (I have not myself been able to see this); and P. COLLART in *Rev. de Phil.*, ser. 3, ii, 69-70.

A new part of P.S.I. has appeared, forming fasc. 1 of vol. ix. It must rank among the most important of all except vols. iv and v, which contained the bulk of the Zenon papyri. That wonderful archive is represented here also; for the first section of the fascicule is occupied by translations (from the master hand of SPIEGELBERG) of the Florentine Demotic papyri from the Zenon collection and of the Demotic portions of bilingual documents, by two newly acquired Greek papyri from the same archive, and by one previously published, of which a new fragment has been found recently. Next comes a short but extremely interesting and valuable series of Greek documents, either independent or appended to Demotic contracts, from Pathyris and the neighbourhood, obtained in 1905 by E. SCHIAPARELLI in the course of excavations in the Valley of Dêr el-Medîneh, and now in the Turin Museum. Found in the ruins of a house and enclosed in two pots, they are in excellent preservation, and their intrinsic interest, particularly in religious matters, is considerable. Only the Greek is here published; it is much to be hoped that before very long it will be possible to issue a complete edition of the Demotic texts also. This section is followed by two valuable Latin documents. The first of these is of quite unusual interest, from various points of view: it was written at the Palestinian Caesarea, not in Egypt, it is a petition, a class of document not common among extant Latin papyri, it is, as WILCKEN perceived, an example of a "double deed," and its contents are of value for military matters. The date is A.D. 150. The second document is a waxed tablet, the last of a triptych, containing the attestation of the acceptance of an inheritance; date A.D. 151. These are followed by various Greek papyri, ranging in date from A.D. 15 to the end of the 3rd century, all of them possessing considerable interest. The last section of this part is occupied by a further selection of papyri at Alexandria, which M. Norsa had previously published (*Papiri del Museo greco-romano di Alessandria*, in *Bull. Soc. Arch. d'Alex.*, no. 23, 267-86). Texts and commentary are here reproduced without change. These papyri, which range in date from A.D. 26 to the 6th century, are not of outstanding importance but offer various points of interest. No. 1043 is a puzzling lease, difficult to explain (if ὑμῶν in l. 20 is for ἡμῶν can it be the body of γεωργοί of a village taking over a communal lease of αἰγιαλός previously held by οἱ περὶ Πακῶσιν?); 1048 contains the new word ὀβολισμός; 1049 and 1050 are from the Heroninus archive; 1053 is a fragment of what would have been a most interesting document (2nd-3rd century) relating to the ἐμβολή; 1055 (a) is of interest for social life in the 3rd century (πορνοβοσκοί who were μισθωταὶ τῶν κοινείων τῆς πόλεως); 1058 is a lease of an ἐργαστήριον χρυσοχοεῖον (5th-6th century; in l. 2 should not εἰ[χω] be εἰ[χis], i.e. the document is a sub-lease?). There are three excellent plates (the two Latin documents), and the editing is of the usual high quality. *Publicazioni della Società Italiana; Papiri greci e latini*, ix, fasc. 1, nos. 1001-61, pp. 1-96, 3 plates. Firenze, Anonima Libreria Italiana, 1928. L. 100. This fascicule and the previous one are reviewed together by WILCKEN in *Archiv*, ix, 71-83 (very important as usual). The Byzantine portion of the previous part (viii, ii) is reviewed by F. ZUCKER in *B.Z.*, xxviii, 177-9.

COLLART's edition of the Bouriant Papyri (*Journal*, xiv, 140 f.) has been reviewed by K. FR. W. SCHMIDT in *G.G.A.*, 1928, 145-81 (detailed and elaborate; largely linguistic); E. BICKERMANN in *O.L.Z.*, xxxi, 474-5; W. SCHUBART in *Gnomon*, iv, 222-4 (mostly on the literary texts); A. S. HUNT in *Journal*, xiv, 186; A. D. NOCK in *Cl. Rev.*, xlii, 149; H. I. B[ELL] in *J.H.S.*, xlviii, 127-9; F. Z[UCKER] in *B.Z.*, xxviii, 179-80; and M. HOMBERT in *Rev. Belge*, vii, 1045-8 (list of texts).

ZUCKER and SCHNEIDER's small publication of Jena Papyri (*Journal*, xiii, 97 f.) has been reviewed by WILCKEN in *Archiv*, ix, 84-5.

A work which I have been unable to see and know only from reviews by P. F. REGARD (*Rev. ét. anc.*, xxx, 229-31) and J. B. CHABOT (*Journ. Sav.*, 1928, 248-9) appears to contain a selection of miscellaneous papyrus texts, and I therefore notice it here, but I do not know which papyri are included. This is F. M. ABEL's *Grammaire du grec biblique* noticed below in § 8. The *Rev. Belge*, 1928, 305, notices among Brussels doctoral dissertations for 1926-7, *Lettres privées trouvées parmi les papyrus grecs d'Égypte*, by CLAIRE PRÉAUX, but it would appear to be unpublished and I cannot say whether it contains a selection of texts and is rightly included in this section.

Ptolemaic. The most noteworthy item in this section is the third volume of EDGAR's magnificent edition of the Zenon papyri at Cairo. It concludes the dated or datable documents, covering the years

250-239 B.C., and adds a series of undated ones arranged alphabetically, according to the names of the correspondents, from A to Ω. It does not however exhaust the treasures of the Cairo Museum. There remain to be dealt with several groups of papyri acquired since the printing of the Catalogue began, a long series of accounts containing, according to EDGAR, "much that is interesting," a number of letters of which the writers' names are lost but which yield some connected sense, and a mass of smaller fragments. It seems clear that at least one further volume and probably two will be necessary. And this is the Cairo collection only! During the whole of the period covered by the dated documents of this volume Zenon was living in the Fayyum, and the later ones were written after the disappearance of Apollonius, when Zenon was but a private landowner; but there is really little, if any, falling off in interest, even though we miss the wider horizons of earlier volumes. To pick out all the points worthy of special attention would require an amount of space far beyond the limits of a bibliography; suffice it to say that on almost every page there is something of interest, and that the proportion of previously unpublished texts is considerable. There are the usual indexes, preceded by a list of the papyri (a very useful feature, omitted in some papyrus publications) and a concordance of catalogue and inventory numbers, and some important addenda, which include several newly identified fragments; and the volume concludes, like its predecessors, with a large number of generally good facsimiles, which alone would make this Catalogue indispensable to all students of Ptolemaic papyri. *Zenon Papyri*. Vol. III. (*Cat. Gén. d. Ant. Égypt. du Musée du Caire*.) Le Caire, Impr. de l'Inst. Français, 1928. Nos. 59298-59531. Pp. v + 293, 30 plates.

A papyrus from the Zenon archive, now in the library of New York University, has been published, with an elaborate commentary, by CASPER J. KRAEMER, Jr. It contains four documents, of which three are published. They are: (1) Hypomnema by Haryotes to Nicanor the nomarch, asking him to instruct Achoapis to release Petosiris, under security, for the work of the harvest; (2) Letter of Nicanor to Achoapis accordingly; (3) Instructions by Achoapis to Alexander, year 10 (?). *The Nomarch Nicanor—P. NYC Inv. II 89*, in *Trans. Am. Phil. Ass.*, LVIII, 155-69, 2 plates.

Three more papyri connected with Zenon are published by C. C. EDGAR. The first is P. Petrie II, 13 (11) (P. Lond. 539), here republished in a much more intelligible text, which is obviously correct in the main, though the middles of the lines are conjecturally supplied. Though not from the Zenon archive, it is from a Zenon, who may probably be identified with him of Philadelphia. The second and third are from the Zenon archive itself, the former made up of two fragments in the Cairo and Michigan collections respectively, the latter a complete papyrus in the Michigan library. No. 2 is a petition to the king from Attalus, no. 3 a royal order, both of considerable interest. *Three Ptolemaic Papyri*, in *Journal*, XIV, 288-93.

The following publications of 3rd century papyri are reviewed by WILCKEN in vol. IX of the *Archiv*: WESTERMANN's *Lease from the Estate of Apollonius* (*Journal*, XIV, 141), pp. 67-8; BELL's *Greek Sightseers* (*ibid.*), pp. 66-7 (see also OTTO's *Seleukidengeschichte* in § 4 and ROSTOVZEFF's *Greek Sightseers* in § 5), and *Waxed Tablets* (*ibid.*), p. 100; and ZÜCKER's *Griech. Urk. oberag. Herkunft* (*ibid.*), pp. 68-70.

The long-expected fourth fascicule of vol. I of the Lille Papyri has now appeared. It contains only addenda and corrigenda and the indexes, with some facsimiles. If the corrections are numerous this is due to the great difficulty of decipherment offered by many of the papyri and the length of time which has elapsed since the publication of the first two fascicules. *Papyrus Grecs*. P. JOUGUET, P. COLLART, J. LESQUIER. (Institut Papyr. de l'Université de Lille.) Paris, Leroux, 1928. Pp. 265-311, 12 plates. Reviewed by W. SCHUBART in *Gnomon*, IV, 593-4.

P. Freib. 12-38 (*Journal*, XIV, 141 f.) is reviewed by M. SAN NICOLÒ in *D. Lit.-Z.*, N.F., v, 738-40. See too § 6, A, v.

In concluding this section reference may be made to the publication, by W. SPIEGELBERG, of a Demotic contract of service (Berlin Ostrakon 6528) long ago published by BRUGSCH but not previously understood. *Vertrag über Dienstvermietung*, in *Demotica*, II (*Sitz.-Ber. Bayer. Ak.*, 1928, 2. Abh.), 49-52. For GUÉRAUD's publication of an inscription in honour of Amenothès (*Bull. Inst. Fr. d'Arch. Or.*, XXVII) see § 2 above.

Roman. SCHUBART has published a Latin papyrus, interesting more for its date and the language in which it is written than for its contents. It is a letter, written in rustic capitals of an early type, from a slave named Phileros to a certain Menander, slave of Diogenes, or rather to his fellow-slaves generally. As slaves and master alike were clearly Greek and the papyrus was presumably found in Egypt, the use of Latin is curious, and SCHUBART suggests as the motive a desire to keep the contents more secret, though they do not seem of such importance as to call for special secrecy. SCHUBART, on the ground of both the hand and the orthography (note that *ei* is used for long *i* throughout), dates the letter in the 1st century B.C., perhaps even under the later Ptolemies, when there were of course many Romans at Alexandria. WILCKEN

(*Archiv*, ix, 85) remarks that the use of Latin may perhaps point rather to the Augustan age; but if the motive was indeed secrecy the earlier period, when Latin was less familiar, is the likelier. *Ein lateinischer Brief auf Papyrus*, in *Ber. u. d. Preuss. Kunstsammlungen*, XLIX, 43-4, 1 plate.

Attention may here be called to an important text which, though it belongs to the sphere of epigraphy, not papyrology, is of interest to the papyrologist because it furnishes a parallel to a well-known papyrus text, the letter of Claudius to the Alexandrines. This is a letter of Tiberius to Gytheum in Laconia. It is in reply to an offer of divine honours, which Tiberius declines for himself, though he applauds the rendering of them to Augustus. As for Livia, ἀποκρινεῖται ὅταν αἰσθηταὶ παρ' ὑμῶν ἦν ἔχετε περὶ τῶν εἰς αὐτὴν τιμῶν κρίσιν. Addressed to a town of little importance and dealing with a single point only, it is naturally much briefer than the letter of Claudius, but it shows that the latter was following an established principle of Imperial policy. S. B. ΚΟΥΓΕΑΣ, Ἐπιγραφικαὶ ἐκ Γυθείου Συμβολαί, III. Ἐπιστολὴ Τιβερίου, in Ἑλληνικά, I, 38-43; see also 152-7.

C. J. KRAEMER reviews OLSSON's *Papyrusbriefe* in *Cl. Weekly*, XXI, 23-5. In this connexion I may mention that the *Rec. Belge*, 1928, 306, records a thesis for the doctorate of Brussels by EUG. DELTOMBE, entitled *Recueil de lettres privées grecques trouvées sur papyrus (2^e siècle après J.-C.)*.

C. W. KEYES has published, from the Columbia collection (P. Col. Inv. No. 6) a petition, dated A.D. 3, to the basilicogrammateus of the Division of Themistes from a δημόσιος γεωργός of Theadelphia, who had, according to his own account, been wrongfully imprisoned. [N.B. Does not τινί ποτε τῶν λόγων mean simply "on some pretext or other" rather than "because of some matter connected with the accounts"?] *The Petition of a State Farmer in Roman Egypt*, in *Cl. Phil.*, XXIII, 25-9.

S. EITREM and H. HOLST publish three papyri from the Oslo collection, all of them of some interest. They are: (1) Lease of land in the οἰσία of Marcus Antonius at Karanis. A.D. 29. Facsimile; (2) Petition to a centurion, mentioning the Δορυφοριανὴ οἰσία. A.D. 71-2. Probably Karanis; (3) Transfer of a nomination to the liturgical office of πράκτωρ by four phylarchs. Severus Alexander. Facsimile. *Three Greek Papyri in Oslo*, in *Klio*, XXII, 221-7, 2 plates. WILCKEN publishes some corrected readings of these papyri, made during his stay in Oslo on the occasion of the Historical Congress last year, to which EITREM adds a few further corrections, his own and others'. *Zu drei Osloer Papyri*, in *Symb. Oslo.*, VII, 33-5.

H. I. BELL has published two papyri from the London collection, both relating to the same case, the hypothecation by one of the owners of his share in a female slave owned jointly by three brothers. According to him he pledged only his third, but his brothers accused him of pledging the whole. The earlier of the papyri is the petition to this effect by the brothers dated A.D. 168, the second an undertaking, dated A.D. 173-4, by the hypothecator that he will produce proofs of his assertion that he pledged only a third. The parties were citizens of Antinoopolis resident in the Fayyum. *A Family Dispute concerning Hypothecation*, in *Studi in onore di P. Bonfante*, 1929, III, 61-71.

O. GUÉRAUD republishes the Cairo Latin tablets published by DE RICCI in 1906, giving on p. 119 a facsimile of two passages which he was unable to read. The first is clearly the amount of the *census*, though I am unable to read the number of sestertia; the second is the much-discussed formula *q. p. f. c. r. e. a. d. k.* (WILCKEN also points this out in his review in *Archiv*, ix, 102-4.) This republication is of great value, advancing the study of this class of document in several ways. *Quelques textes du musée du Caire*, I.—*Textes latins sur tablettes de cire 113-21*, in *Bull. Inst. Fr. d'Arch. Or.*, XXVII, 113-21. WILCKEN, besides his review of this article, just mentioned, also reviews (pp. 100-2) KELSEY's earlier publication (*Trans. Am. Phil. Ass.*, LIV) of a birth certificate, and an article, which must here be mentioned, by H. A. SANDERS, *The Birth Certificate of a Roman Citizen*, in *Cl. Phil.*, XXII, 409-13, in which SANDERS puts forward the theory that the latter part of the formula above referred to is to be read *c(ivem) R(omanum) e(xscripsi) ad K(alendarium)*, translating it, "I [name of the father] have written out for the public monthly record that a son was born, etc." WILCKEN rejects this explanation and also criticises certain of the assumptions which SANDERS made in support or illustration of his theory. In the meantime SANDERS had published a second article on the subject, further expounding his view, *A Birth Certificate of the year 145 A.D.*, in *A.J.A.*, 2nd S., XXXII, 309-29.

G. CANTACUZÈNE publishes an important and interesting article on the *pridianum* edited by HUNT in the *Raccolta Lombroso*. *Un papyrus latin relatif à la défense du Bas Danube*, in *Aegyptus*, ix, 63-96. A facsimile of this papyrus will appear in the next part of the New Palaeographical Society's publications.

¹ Ἄ propos of ἐπ' ἐξτροφῇ in l. 10 of the first papyrus Prof. SCHUBART writes to me that the same phrase can now certainly be read in the Gnomon papyrus, § 1, l. 10.

Among WILCKEN's reviews in *Archiv*, IX, the following deal with publications of 2nd century papyri: WINTER, *In the Service of Rome* (*Journal*, XIV, 143), pp. 85-9; BOAK, *Epikrisis Record* (*ibid.*), p. 89; SCHUBART-BELL, *A Parallel to Wilcken, Chrest. 144* (*ibid.*, 142-3), p. 89.

In his article *Beiträge zur antiken Urkundengeschichte* (*Archiv*, IX, 24-46) noticed below in § 6 E. BICKERMANN publishes (pp. 44-6) from a transcript by H. I. BELL the complete text of the Hermopolite census return of A.D. 132 on which the latter contributed a note to *Archiv*, VI, 107-9, while on p. 35 he publishes from a provisional transcript by WILCKEN an unedited Strassburg papyrus containing an order by the strategus of the Hermopolite nome concerning the epikrisis of οἱ ἀπὸ μητροπόλεως. Similarly, in K. OHLY'S *Stichometrische Untersuchungen* (see below, § 7) there is published, with an instructive commentary, on pp. 88-90 (cf. the *Nachträge*, pp. 126-9), the full text of the interesting account of a scriptorium which was the subject of an article by BELL in *Aegyptus*, II, 281-8.

WESSELY has published an interesting letter, apparently in his own collection, announcing the grant by the prefect of permission to transport stones. He assigns it to the 3rd century. *Ius lapides transportandi*, in *Studi Bonfante*, II, 17-18.

Roman-Byzantine. Reviews of P. Oxy. XVII have dealt chiefly with the literary papyri there published and are therefore noticed above, in § 1. The documents are discussed with his usual mastery by WILCKEN in *Archiv*, IX, 89-97.

WILCKEN reviews in *Archiv*, IX, 97-8, MANTEUFFEL'S *Epistulae privatae ineditae* (*Journal*, XIV, 144).

H. B. VAN HOESSEN and A. C. JOHNSON publish from the Princeton collection five leases, ranging in date from A.D. 230 to A.D. 382, and all possessing points of interest. They are well edited, with ample commentary and useful references to parallels in the case of the first, which is a lease of a palm grove. *Five Leases in the Princeton Collection*, in *Journal*, XIV, 118-25.

Byzantine. WILCKEN reviews in *Archiv*, IX, 98-9, WINTER'S *Family Letters of Paniskos* (*Journal*, XIV, 143).

An important and interesting Latin papyrus, which is unfortunately very difficult to read, has been published by S. DE RICCI. It is a petition by Abinnaeus, the well-known *praepositus castrorum*, to the Emperors. It was merely described, not edited, in the second volume of the London Catalogue, where the Abinnaeus papyri were published, but was copied for their projected edition of this archive by MARTIN and BELL, who discovered subsequently that DE RICCI had also copied it. It is now published in the hope that other scholars will contribute suggestions which may lead to the further improvement of the text before the time comes to incorporate it finally in the volume. *A Latin Petition of Abinnaeus* (*Papyrus B.M. 447*), in *Journal*, XIV, 320-2, 2 plates.

G. ZERETELI publishes a 5th century wooden tablet in the Hermitage collection. The text is apparently an official's exercise in the chancery style; and it derives a special interest from the fact that it is addressed to Flavius Antiochus Sabinus Demoniacus, Count of the Sacred Consistory and of the στρατιωτικά τέγματα of the Theban *limes*, whom ZERETELI identifies, rightly as it seems, with a general mentioned by Malalas, and with a man known from two inscriptions of Philae. In illustration of this "Probearbeit" he publishes two similar texts, one from his own collection and one formerly in the possession of B. TURAEV. *Eine griechische Holztafel des 5. Jahrh. in der Sammlung der Eremitage*, in *Aegyptus*, IX, 113-28.

For reviews of the Metropolitan Museum *Monastery of Epiphanius* see § 2.

Byzantine-Arab. Reference may here be made to a publication by A. MALLON of some Coptic ostraca from Thebes (*Quelques ostraca coptes de Thèbes*, in *Rev. de l'Ég. Ancienne*, I, 152 ff.), which, as interpreted by WESSELY (*Über vier Ostraka aus Luxor*, in *Phil. Woch.*, XLVIII, 509-10), furnish useful evidence as to the capacity of the sack and the wagon-load. WESSELY assigns them, no doubt rightly, to the 7th century, but they may date from either before or after the Arab conquest.

Arab. H. I. BELL has published the last instalment of his *Translations of the Greek Aphrodito Papyri in the British Museum* in *Der Islam*, 1928, 4-8. This consists of translations of P. Lond. 1441 and 1449, which were sent to press before the war but owing to the interruption of communications thus caused could not then be printed off and were subsequently overlooked.

W. SCHUBART reviews P. Ross-Georg. IV in *Gnomon*, IV, 151-3.

Finally, reference may be made to F. LL. GRIFFITH'S very interesting monograph *Christian Documents from Nubia* (*Proc. of Brit. Acad.*, XIV, pp. 30, 4 plates), since, though strictly outside the sphere of this bibliography, it throws valuable light on the fortunes of the Christian kingdom which lay to the south of Egypt. The titles, modelled on those of Byzantium, which occur in the inscriptions, are curious.

4. POLITICAL HISTORY, BIOGRAPHY, ADMINISTRATION, TOPOGRAPHY, CHRONOLOGY.

General. M. ROSTOVITZ has written a useful, if somewhat one-sided, account of *Ptolemaic Egypt* for vol. VII of the *Cambridge Ancient History*: chap. IV, pp. 109-54.

A third edition of the first volume of KAERST's *Geschichte des Hellenismus* has been issued: Leipzig, Teubner, 1927: it contains little fresh matter except in the appendices. It is reviewed by W. W. TARN in *Cl. Rev.*, XLII, 148.

The second edition of BELOCH's *Griechische Geschichte* is reviewed by W. OTTO in *Phil. Woch.*, XLVIII, 1097-1101; by U. KAHRSTEDT in *D. Lit.-Z.*, 1928, 1314; by H. BERVE in *Gnomon*, IV, 469-79; and by M. P. NILSSON in *G.G.A.*, CXC, 88-91.

JOUGUET's *L'impérialisme macédonien* (see *Journal*, XIII, 103) is reviewed by J. BIDEZ in *Rev. Belge*, VII, 217-19; by M. MERZAGORA in *Aegyptus*, VIII, 364-70; by A. C. JOHNSON in *A.J.A.*, XXXII, 126-7; in *Bull. Bibl. et Péd.*, 311, 171-2; and by E[v.] B[RECCIA] in *Bull. Soc. Arch. d'Alex.*, no. 23, 397-9.

BEVAN's *History of Egypt under the Ptolemaic Dynasty* (see *Journal*, XIV, 144) is reviewed by C. C. EDGAR in *Journal*, XIV, 198-9; by W. W. TARN in *Cl. Rev.*, XLII, 79-80; by J. G. M[ILNE] in *J.H.S.*, XLVIII, 106-8; by P. CLOCHÉ in *Rev. ét. anc.*, XXX, 165-6; in *Anc. Egypt*, 1928, 18-19; and by E[v.] B[RECCIA] in *Bull. Soc. Arch. d'Alex.*, no. 23, 396-7.

The second edition of WILCKEN's *Griechische Geschichte* is reviewed by W. OTTO in *D. Lit.-Z.*, 1928, 727-30.

I have not seen H. RIPPLINGER, *Histoire de l'ancienne Égypte de l'origine au début du Christianisme*, Paris, 1928, which is noted in the bibliography in *Gnomon*.

Political history and position of nationalities. W. W. TARN discusses *The Hellenistic Ruler-Cult and the Daemon* in *J.H.S.*, XLVIII, 206-19. See also in § 2. Reference may here be made to E. R. GOODENOUGH, *The Political Philosophy of Hellenistic Kingship*, in *Yale Classical Studies* edited...by Austin M. Harmon, I, 55-102.

There is important material for early Ptolemaic history in WALTHER SCHWAHN's article *Zu Hekataos von Teos* in *Rhein. Mus.*, N.F., LXXVII, 153-9.

F. HEICHELHEIM has published *Nachtrag zur Prosopographie der auswärtigen Bevölkerung im Ptolemäereich* (see *Journal*, XIII, 105) in *Archiv*, IX, 47-55; his previous work is reviewed by O. LENZE in *Vierteljahrs. f. sozial- und Wirtschaftsgesch.*, XX, 516-18; and E[v.] B[RECCIA] in *Bull. Soc. Arch. d'Alex.*, no. 23, 394-5.

W. OTTO's paper *Beiträge zur Seleukidengeschichte des 3. Jahrhunderts v. Chr.*, in *Abhandl. Bayer. Ak. d. Wiss.*, XXXIV, Abh. 1, München, 1928, pp. 98, should be noted for its bearing on Egyptian history. For ROSTOVITZ's article *Greek Sightseers in Egypt* see § 5, *Social Life*.

J. G. MILNE writes on *Egyptian Nationalism under Greek and Roman Rule* in *Journal*, XIV, 226-34.

H. BERVE's *Das Alexanderreich* (see *Journal*, XIV, 145) is reviewed by F. OERTEL in *Neue Jahrb.*, IV, 385-9; by V. EHRENBURG in *Hist. Z.*, CXXXVII, 98-101 (interesting); by P. JOUGUET in *Rev. de Phil.*, sér. III, II, 361-73 (important); and by E. KORNE-MANN in *Verg. u. Gegenw.*, XVII, 172.

V. EHRENBURG's *Alexander und Aegypten* (see *Journal*, XIII, 104; XIV, 145) is reviewed by E. KORNE-MANN in *Verg. u. Gegenw.*, XVII, 173; by H. BERVE in *Vierteljahrs. f. sozial- u. Wirtschaftsgesch.*, XX, 279-80; and by E[v.] B[RECCIA] in *Bull. Soc. Arch. d'Alex.*, no. 23, 383-92.

W. SPIEGELBERG includes *Weitere Beiträge zur Erklärung des Priesterdekretes zu Ehren des Ptolemaios Philopator* (see *Journal*, XIII, 105) in *Demotica*, II, *Sitz.-Ber. Bay. Ak.*, 1928, Abh. 2, pp. 6-12.

SPIEGELBERG and OTTO, *Eine neue Urk. zu der Siegesfeier des Ptol. IV*, is reviewed by E. BICKERMANN in *O.L.Z.*, XXI, 104; and by F. VON BISSING in *Phil. Woch.*, XLVIII, 862-4.

F. GEYER's *Alexander der Grosse* is reviewed by E. KORNE-MANN in *Verg. u. Gegenw.*, XVII, 173.

V. TSCHERIKOWER's *Die hellenistischen Stadtgründungen* (see *Journal*, XIV, 145) is reviewed by P. GRAINDOR in *Rev. Belge*, VII, 651-3; and by E. BICKERMANN, with additions to list of cities and references, in *Gnomon*, IV, 351-2.

U. KAHRSTEDT's *Syrische Territorien* (see *Journal*, XIV, 145) is reviewed by J. H. THIEL in *Museum*, XXXV, 205-6.

W. SCHUBART's *Griechen in Aegypten* (see *Journal*, XIII, 105; XIV, 145) is reviewed by B. A. VAN GRONINGEN in *Museum*, XXXV, 93; by M. HOMBERT in *Rev. Belge*, VII, 219-21; by V. EHRENBURG in *Hist. Z.*, CXXXVII, 359; and by E[v.] B[RECCIA] in *Bull. Soc. Arch. d'Alex.*, no. 23, 371-82.

The bibliography in *Aegyptus*, IX, mentions a work by J. M. ROTH, *Greek papyri lights on Jewish history*, New York, 1924.

H. I. BELI's *Juden und Griechen* (see *Journal*, XIII, 106; XIV, 146) is reviewed by M. HOMBERT in *Rev. Belge*, VI, 860-1; by V. EHRENBURG in *Hist. Z.*, CXXXVI, 310; by E. KORNEMANN in *Verg. u. Gegenw.*, XVII, 178; and by E[v.] B[RECCIA] in *Bull. Soc. Arch. d'Alex.*, no. 23, 393-4.

STERLING TRACY in *III Maccabees and Pseudo-Aristias*, in *Yale Classical Studies edited...by Austin M. Harmon*, I, 241-52, would regard the Aristias letter as a rebuke to the school of thought represented by *III Maccabees*.

CLARK HOPKINS pleads for a reconsideration of the date assigned to the trial of Isidorus and Lampon. He seeks first to invalidate the arguments advanced by WILCKEN and PREMERSTEIN in favour of the later date and then to establish others for the date A.D. 41. Some of his arguments have undoubtedly weight, but he does not meet the difficulty of fitting in the trial (and execution!) of Isidorus and Lampon between the accession of Claudius and the writing of his letter to the Alexandrines. *The Date of the Trial of Isidorus and Lampo before Claudius*; *B.G.U.* II, 511, and *P. Cairo*, 10448, in *Yale Classical Studies edited...by Austin M. Harmon*, I, 1928, 171-7. [H. I. B.]

On the history of later Roman and Byzantine Egypt there is little to report, but the results of much specialised work have been summarised in two useful surveys. A. E. R. BOAK in the *Am. Hist. Rev.*, XXXIV, 1-8 has published a paper (read before the Ancient History section at the Annual Meeting of the American Historical Association held at Washington in December 1927) on *Byzantine Imperialism in Egypt*. The story, he concludes, is one "of progressive disintegration," of the decay of a civilisation and the rise of a nationality. "The ruin of the middle classes, the growth of the great landed proprietors and the bureaucratic maladministration were ills which Egypt shared with the empire as a whole. What was more peculiar to Egypt was the revival of an Egyptian nationality which expressed itself in a conscious linguistic, cultural, religious and political hostility to its rulers. Under these conditions Egypt was governed and held only by military force and could not be expected to protect itself for the empire from outside attack. Accordingly, the continuation of Byzantine rule was dependent upon the presence of an adequate garrison, and this Constantinople failed to provide." It might, perhaps, be suggested that Egypt despite its foreign rulers had never ceased to be a nation, and that in this fact lies, at least in part, the explanation of the failure of Roman rule. The obstinate devotion of Egypt to Christianity in the last great persecution, its consistent opposition to the religious policy of the central government would thus represent the forms assumed by a national consciousness which Greek, Roman and Byzantine alike failed to extinguish. That national consciousness was ready to seize on every favourable opportunity through which it might make its protest against foreign domination—from the day of the battle of Raphia down to the Arab conquest.

In *J.R.S.*, XVII, 1-13, J. G. MILNE has outlined the stages in *The Ruin of Egypt by Roman mismanagement*. He contends that "the prosperity of Egypt declined constantly under Roman rule from the time of the conquest till the central government lost its grip upon the country, and though the decline was more rapid at some periods than at others, there was never any sign of recovery or even any real check. The burden of supplying the tribute to Rome was first thrown on the upper and middle classes, then, as their resources were exhausted, it was passed on to the peasantry: the administrative changes of Severus were a fresh attempt to put the screw on the middle classes, those of Diocletian to do the like with the peasants: but all through there was no departure from the great principle of policy, first laid down by Augustus, that Egypt was to be exploited solely for the benefit of the imperial treasury.... It seems clear that the explanation of the state of absolute ruin to which Egypt was reduced after four centuries of Roman rule, in spite of the fact that the natural fertility of the country was not, and could not be, permanently impaired, must be found primarily in the uninterrupted drain of capital to Rome: and this drain took a form which was at once most insidious in its operation and most fatal in the end—the tribute of corn. It must be remembered that the enormous quantities of corn shipped annually from Alexandria to Rome, or later to Constantinople, were a dead loss to Egypt; not a penny was paid for them, and though they might be regarded in theory as a rent paid by the cultivators to the Emperor as owner of the soil, the landlord was an absentee, and no part of the rent accrued to the benefit of the country by his expenditure of it: on the contrary it was wasted in the most vicious way economically possible by being used to pauperise the inhabitants of Rome."

For Cyril's conflict with Nestorius reference may be made to the article by R. ABRAMOWSKI, *Zur "Tragodie" des Nestorius*, in *Z. f. Kirchengesch.*, XLVII, N.F., x, 305-24, which is a careful study of the

Nestorian Church History composed towards the end of the sixth century by a priest from Bet-Arbaje. This was published by NAU in the *Patrologia Orientalis*, IX, pt. 5, 1913, under the title, *La seconde partie de l'histoire ecclésiastique de Barhadbešabba 'Arbaja*, etc.

G. BARDY in the *Revue apologetique*, XLII (1926), 643-51, 707-21, has published an article on *La vie chrétienne aux II^e et IV^e siècles d'après les papyrus*. The article is only known to me through a citation in *Aegyptus*, IX, no. 6857. [See also § 2.] For C. WESSELY's *Ueber vier Ostraka aus Luxor* see § 3 above.

Administration. An important article by M. CARY, *A Constitutional Inscription from Cyrene*, appears in *J.H.S.*, XLVIII, 222-38. He agrees with TH. REINACH in dating it to 322-1 B.C., and examines the various provisions exhaustively.

Important also is U. WILCKEN's *Zum Germanicus-Papyrus*, in *Hermes*, LXIII, 48-65, which deals with the organisation of corn-storage in Alexandria for export to Rome and local supply.

J. ZINGERLE, *Römisch-Militärisches aus Aegypten*, with a *Nachwort* by U. WILCKEN, in *Archiv*, IX, 5-13 and 13-14, elicits some information from inscriptions at Gebel-Tukh and Philae as to the employment of Roman troops.

In *Ius lapides transportandi*, in *Studi Bonfante*, II, 17-18, C. WESSELY shows that permission for obtaining stone had to be got from the prefect.

A. VON PREMERSTEIN discusses *Die fünf neugefundenen Edikte des Augustus aus Kyrene* in *Z. Sav.-Stift.*, XLVIII, 419-531. See also § 6.

E. BICKERMANN in *Beiträge zur antiken Urkundengeschichte*, in *Archiv*, IX, 24-46, deals with ἀπογραφή, οἰκονομία, ἐπικρίσις, and Αἰγύπτιοι.

P. COLLOMP's *Chancellerie et diplomatique des Lagides* (see *Journal*, XIII, 107, XIV, 146) is reviewed by F. ZUCKER in *Gnomon*, IV, 380-4; and by F. BILABEL in *O.L.Z.*, XXXI, 1080-3.

On Byzantine administration the most important publication is the second edition of Mlle. G. ROULLARD's *L'administration civile de l'Égypte byzantine*, with a preface by Professor DIEHL. Paris, Geuthner, 1928. Pp. xv+268. (The former edition was of 242 pp.) The form and arrangement of the book are unchanged, but illustrations have now been added, and in the words of Professor DIEHL, "le présent volume est une édition nouvelle largement complétée par des recherches fort étendues." The importance of this study was generally recognised when it first appeared, and this revision will be an essential work of reference for all students of the history of Byzantine Egypt.

H. BOTT in a dissertation of the university of Frankfurt a. M. has dealt with *Die Grundzüge der diokletianischen Steuerverfassung*. Darmstadt, L. C. Wittich, 1928. Pp. 71. It is impossible in this place to analyse the argument; it must suffice to state the author's conclusion: Diocletian's taxation system was "eine in sich geschlossene Einheit"—based upon a single unit, the caput. It is therefore misleading to distinguish between a land-tax and a poll-tax: there is rather a single tax levied alike on produce and labour. It may be noted that a new edition is reported of A. PIGANIOU's *L'impôt de capitation sous le Bas-Empire romain*. Paris, Geuthner, 1928. Pp. 101. 20 fr.: see *Gnomon*, IV, *Bibliographische Beilage* 4/5, p. 28. At the moment of writing there comes to hand another work, obviously of great importance, on the same subject: F. LOT, *L'impôt foncier et la capitation personnelle sous le Bas-Empire et à l'époque franque*. Paris, Champion, 1928. Pp. 139.

STADE's work on Diocletian (*Journal*, XIII, 92-3) has been reviewed by J. VOGT in *Hist. Z.*, CXXXVII, 136-8; and by N. H. BAYNES in *J.R.S.*, XVII, 124-5.

ERNST STEIN is writing a *Geschichte des spätromischen Reiches* in two volumes: vol. I has appeared and carries the history of the Empire from A.D. 284 to A.D. 476. Seidel, Vienna. Pp. xxii+592, with 10 plates and 4 maps. Sewn M.26, bound M.30. This is specially valuable for political and administrative history, and the elaborate sections on the imperial hierarchy and the civil service should be particularly noticed. The completeness with which references to the original authorities are given will render a great service to all students of the period¹.

Arab administration of Egypt has been considered with reference to the evidence of the papyri by A. S. TRITTON in *Journ. of Roy. Asiatic Soc.*, 1928, 485-508, in a paper on *Islam and the Protected Religions: Taxation*, while F. DÖLGER's *Beiträge zur Geschichte der byzantinischen Finanzverwaltung*, etc., has been reviewed by H. I. B[ELL] in *J.H.S.*, XLVIII, 114-16, who from the material contained in P. Lond.

¹ Though not written with special reference to Egypt, F. MARTROYE's article on *Les patronages d'agriculteurs et de vici au I^{er} et au IV^e siècles*, in *Revue historique de droit français et étranger*, 4^{me} série, 7^e année, 201-48, may here be mentioned.

iv compares the administrative methods of the Byzantine Empire with those employed in the early period of Arab rule in Egypt.

Biography. In *Journal*, xiv, 246-60, W. W. TARN publishes an interesting and suggestive lecture on *Ptolemy II*.

For *Cyril* and *Nestorius* see above, *Political history*.

Topography. J. MORR's article on *Poseidonios, eine Quelle Strabons im xvii Buche in Philologus*, LXXXIII, 306-15, is useful for Egyptian geography.

A. CALDERINI discusses *Località dell' Ossirinchi (Egitto)* in *Rend. Ist. Lomb.*, LVIII, 529-36.

C. WESSELY reviews H. RINK's dissertation, *Strassen und Viertelnamen von Oxyrhynchus*, in *Byz.-Neugr. Jahrb.*, v, 245-6.

EV. BRECCIA publishes a French translation of his article *Etiam periere ruinae?* (on Alexandria), contributed to the *Raccolta Lumbroso*, in *Bull. Soc. Arch. d'Alex.*, no. 23, 355-69.

In *Suez and Clysmā*, in *Journal*, xiv, 277-9, J. J. HESS contends that Clysmā, Al-Kūlzūm in Arabic authors, did in fact lie near the modern Suez, against H. GUTHE's denial of this view.

Chronology. The discussion mentioned in *Journal*, XIII, 110, XIV, 147, is continued by A. STEIN, *Observations on the Chronology of the Roman Emperors in the second half of the third century*, in *Journal*, xiv, 16-18; H. MATTINGLY, *Note on the foregoing*, *ibid.*, 19; and J. G. MILNE, *Chronological Pitfalls*, *ibid.*, 20-1.

For Egyptian chronology the exhaustive treatise of W. KUBITSCHKE, *Grundriss der Antiken Zeitrechnung*, München, pp. viii + 241, is of great value: it is reviewed by A. C[ALDERINI] in *Aegyptus*, VIII, 381; by R. LAQUEUR in *D. Lit.-Z.*, 1928, 1122; by J. K. FOTHERINGHAM in *J.R.S.*, XVII, 242-3; and in *J.H.S.*, XLVIII, 257-9.

E. MEYER's *Untersuchungen zur Chronologie der ersten Ptolemäer* (see *Journal*, XIII, 110; XIV, 147) is reviewed by G. CORRADI in *Boll. Fil. Cl.*, XXXIV, 89-91; and by M. HOMBERT in *Rev. Belge*, VI, 369-71.

R. WEIL's *Bases, méthodes, et résultats de la Chronologie égyptienne* is reviewed by E. DRIOTON in *Journ. Sav.*, 1928, 217-22.

A. STEIN uses the evidence of papyri in a paper, *Zur Abfassungszeit der Grammatik des Romanus*, in *Hermes*, LXIII, 480-1, touching the date of Marius Salutaris.

In *Yale Classical Studies*, I, edited for the Department of Classics by AUSTIN M. HARMON, Yale University Press, 1928; London, Milford, pp. 231-8, PRESCOTT W. TOWNSEND writes on *The Chronology of the year 238 A.D.* On the basis of the evidence of papyri as well as of literary and epigraphic sources he concludes that the course of events may be thus summarised:

Beginning of the revolt in Africa	...	...	...	...	ca. March 19
Proclamation of the Gordians as <i>Augusti</i> by the Senate	...	...	...	...	ca. April 1
Death of the Gordians in Africa	...	...	...	...	ca. April 21
Accession of Maximus and Balbinus	...	...	...	...	ca. May 1
Death of Maximinus	...	...	...	...	ca. May 17-23
Death of Maximus and Balbinus: accession of Gordian III	...	...	...	...	ca. August 7 ¹

5. SOCIAL LIFE, EDUCATION, ART, ECONOMIC HISTORY, NUMISMATICS, AND METROLOGY.

General. Egypt fills a good deal of space in W. W. TARN's *Hellenistic Civilisation*, London, 1927, pp. 312, which gives a comprehensive and readable survey of the period: it is reviewed by A. W. GOMME in *Cl. Rev.*, XLII, 75-6; and by J. G. M[ILNE] in *J.H.S.*, XLVIII, 129.

P. VIERECK has written an account of *Philadelphieia: Die Gründung einer hellenistischen Militärkolonie in Aegypten*, Leipzig, 1928, pp. 70, 10 plates: it is reviewed by H. I. BELL in *Gnomon*, IV, 583-6; by C. C. EDGAR in *Journal*, xiv, 330; by P. GRAINDOR in *Rev. Belge*, VII, 1111-13; and by P. COLLART in *Journ. Sav.*, 1928, 289-91; and in *Rev. de Phil.*, sér. III, II, 378-9.

H. SCHNEIDER includes chapters on *Die Kultur der Hellenen* and *Die Kultur der Römer Romder und Byzantiner in Die Kulturleistungen der Menschheit*, Bd. I, 273-442 and 442-519.

W. OTTO's *Kulturgeschichte* (see *Journal*, XIII, 110; XIV, 147) is reviewed by L. WENGER in *Archiv*, IX, 109-10.

¹ It may perhaps be useful for the purposes of comparative study to refer to an elaborate paper published in the same volume by GEORGE McLEAN HARPER, JR. (pp. 105-68) on *Village Administration in the Roman Province of Syria*.

M. ROSTOVITZ's *Social and Economic History* (see *Journal*, XIII, 110; XIV, 147) is reviewed by M. GELZER in *Byz. Z.*, 1927, 387-9; by C. J. KRAEMER in *Cl. Weekly*, XXII, 13-15; and by U. KAHRSTEDT in *G.G.A.*, CXC, 67-87.

Social Life. R. CAGNAT has collected a number of essays under the title *En pays Romain*, Paris, 1927: no. 6, *Indiscretions sur les Égyptiens de l'époque Romaine*, falls under the present head: the book is reviewed by A. ERNOUT in *Rev. de Phil.*, sér. III, II, 387; and noticed by C. W. in *Hist. Jahrb.*, XLVIII, 115.

In *Trans. Am. Phil. Ass.*, LVIII, 132-54, ETHEL H. BREWSTER writes on *A Weaver of Oxyrhynchus; Sketch of a Humble Life in Roman Egypt*, discussing the evidence as to the family of Tryphon, son of Dionysius.

Two items in *Chronique d'Égypte*, IV, by CLAIRE PRÉAUX are *Les Touristes en Égypte dans l'Antiquité*, pp. 139-43; and *Quelques caractères des lettres privées grecques d'Égypte*, pp. 144-55: both are of a popular nature.

M. ROSTOVITZ contributes an article on *Greek Sightseers in Egypt* to *Journal*, XIV, 13-15, dealing with the Zenon papyrus published by BELL in *Symb. Oslo.* (see *Journal*, XIV, 141).

E. BETHE's *Alexandria unter den ersten Ptolemäern* in *Forschungen und Fortschritte*, III, 22, 170, should be noted here.

G. SEURE's *Les impromptus touristiques* (see *Journal*, XIV, 148) is reviewed by S. R[EINACH] in *Rev. Arch.*, XXVI, 305.

K. SCHMIDT's *Das griechische Gymnasium* (see *Journal*, XIV, 148) is reviewed by W. OTTO in *O.L.Z.*, 1928, 265-8.

Finance, Agriculture, Industry. There are frequent references to Egypt in E. H. WARMINGTON, *The Commerce between the Roman Empire and India*, Cambridge, 1928, pp. x+417, which is a full and useful collection of evidence: it is reviewed by V. CHAPOT in *Rev. ét. anc.*, XXX, 328-30; by S. R[EINACH] in *Rev. Arch.*, XXVIII, 173-4; and by M. P. CHARLESWORTH in *J.R.S.*, XVII, 237-8.

A. CALDERINI's *Θρασυποί* is reviewed by W. OTTO in *O.L.Z.*, XXXI, 265-8; and by F. ZUCKER in *Gnomon*, IV, 374-80.

Banking in Egypt is dealt with in an elaborate article by J. DESVERNOS, *Banques et Banquiers dans l'Ancienne Égypte, sous les Ptolémées et la domination Romaine*, in *Bull. Soc. Arch. d'Alex.*, no. 23, 303-48.

W. L. WESTERMANN deals with Egypt at some length in an article *On Inland Transportation and Communication in Antiquity* in *Polit. Science Quart.*, XLIII, 364-87.

G. M. HARPER discusses the Zenon correspondence in *A Study in the Commercial Relations between Egypt and Syria in the Third Century before Christ* in *Am. Journ. Phil.*, XLIX, 1-35.

O. GRABE's *Die Preisrevolution* (see *Journal*, XIV, 148) is reviewed by F. HEICHELHEIM in *Z. f. Numism.*, XXXVIII, 245-55.

M. P. CHARLESWORTH discusses *The Periplus Maris Erythraei* in *Cl. Quart.*, XXII, 92-100, with reference to its date and bearing on the history of Roman policy in the East.

V. MARTIN's *La fiscalité romaine* (see *Journal*, XIII, 112; XIV, 148) is reviewed by M. HOMBERT in *Rev. Belge*, VI, 857-60.

J. G. MILNE writes on *The Currency Reform of Ptolemy II* in *Anc. Egypt*, 1928, 37-9.

M. SCHNEBEL examines *An Agricultural Ledger in P. Bad. 75* in *Journal*, XIV, 34-45.

There is some evidence relating to the Graeco-Roman period in two articles by A. LUCAS: *Egyptian Use of Beer and Wines* in *Anc. Egypt*, 1928, 1-5; and *Silver in Ancient Times* in *Journal*, XIV, 313-19.

CASPER J. KRAEMER deals with *The Skin-clad sheep of Antiquity* in *Cl. Weekly*, XXI, 33-5.

For taxation in the Byzantine and Arab periods see above in § 4, *Administration*.

Education, Science, and Art. W. R. DAWSON collects *References to Mummification by Greek and Latin authors* in *Aegyptus*, IX, 106-12.

R. HINKS describes *A portrait of a Ptolemaic Queen* in *J.H.S.*, XLVIII, 239-42.

Reviews of two parts of *Expedition Ernst von Sieglin. Ausgrabungen in Alexandria*: II. *Die griechisch-ägyptische Sammlung* are by W. OTTO of J. VOGT's *Terrakotten* in *Gnomon*, IV, 257-62 and by G. LIPPOLD of *Malerei und Plastik* in *D. Lit.-Z.*, XXXI, 1515.

From *Lit. Zentralbl.* I take a note of C. BULCKE, *Ewig junge Kunst: Griech.-ägyptische Mumienbildnisse* in *Die Gartenlaube*, 1928, 35-7.

Numismatics and Metrology. There is an exhaustive article by the late TH. REINACH in *Rev. ét. gr.*, XLII, 121-96. *Du rapport de valeur des métaux monétaires dans l'Égypte au temps des Ptolémées.*

A. SEGRÉ's *Circolazione monetaria* (see *Journal*, XIV, 148) is reviewed by F. HEICHELHEIM in *Z. f. Numism.*, XXXVIII, 245-55; and by A. CALDERINI in *Aegyptus*, VIII, 381-2.

E. T. NEWELL makes a careful analysis of *Two Recent Egyptian hoards—Delta and Keneh* in *Numism. Notes and Monographs*, no. 33, New York, 1927, pp. 34.

The currencies of Egypt under the Romans are noticed by H. MATTINGLY in his useful handbook on *Roman Coins from the earliest times to the fall of the Western Empire*. London, 1927. Pp. xx+300, 64 plates.

In *Symb. Oslo.*, VI, 69-74, H. HOLST publishes *Remarks concerning some of the Ptolemaic coins in the Numismatic Cabinet of the University* [of Oslo].

6. LAW.

A. General.

i. *Bibliographies*. P. MEYER's *Juristischer Papyrusbericht V (November 1925 bis Oktober 1927)* has appeared in *Z. Sav.-Stift.*, XLVIII, 587-633. E. PERROT has issued his annual *Bulletin Bibliographique* for the whole of economic and legal history as supplements to *Rev. hist. dr. fr. et étr.*, N.S., VI and VII. The first instalment, covering roughly 1927, defers the lists of German and Italian works and the periodical literature; the second brings the periodical literature up to Dec. 1928. There are also the sections headed *Diritto e amministrazione* of A. CALDERINI's methodical bibliographies in *Aegyptus*, VIII, 226-8 and IX, 186-8. U. WILCKEN's *Urkunden-Referat* in *Archiv*, IX, 63-104, is of course of special importance to jurists, and the *Testi recentemente pubblicati* in *Aegyptus*, VIII, 137-66, 339-50 and IX, 129-42 are also very useful, though they would be more so if dates of documents were given. At the end of a necrology of P. F. GIRARD in *Rev. hist. dr. fr. et étr.*, N.S., VII, 315-25, P. COLLINET brings up to date the bibliography of GIRARD given in *Études d'hist. jur. offertes à P. F. Girard* (Paris, 1912), I, xi-xv. G. M. CALHOUN and C. DELAMERE's *A working Bibliography of Greek Law* (Milford, 1927) is pretty favourably reviewed by E. LEVY in *Z. Sav.-Stift.*, XLVIII, 767-8, unfavourably by K. LATTE in *Gnomon*, IV, 458-9.

ii. *Legal History of Antiquity*. In *Archiv*, IX, 104-18, L. WENGER resumes the conspectus of literature left unfinished by J. PARTSCH, *ibid.*, VII, 258-87 (1912-1923). The present *Literaturübersicht I* (1914-1928) goes back a little in order to include some Italian work not covered by PARTSCH, but in view of WILCKEN's *Referat* it excludes texts, and in view of MEYER's *Bericht* it is eclectic. This first instalment, headed *Allgemeine Darstellungen. Antike Rechtsgeschichte*, develops the doctrine that the history of the legal systems of antiquity must be considered as a whole, and that the broadening of Roman legal history into the legal history of antiquity is the most important task of the modern Romanist. This had already been urged by WENGER with great learning and eloquence in *Der heutige Stand der römischen Rechtswissenschaft*, a work which has been reviewed by F. DE ZULUETA in *Journal*, XIV, 186; by B. KÜBLER in *Z. Sav.-Stift.*, XLVIII, 659-62; by M. BESNIER in *Journ. Sav.*, 1928, 250; by A. CALDERINI in *Aegyptus*, IX, 158-9; by F. LITTE in *O.L.Z.*, XXXI, 834-7; and by H. MITTEIS in *Hist. Z.*, CXXXVIII, 83-8. The most important of these reviews is KÜBLER's, which, while not unsympathetic, implies reserves.

Of the *Literaturübersicht*, to which we return, the core is WENGER's own review of this previous work together with that of an earlier lecture of L. MITTEIS's, *Antike Rechtsgeschichte und romanistisches Rechtsstudium* (1917. 18. *Heft der Mitteil. des Vereins der Freunde des human. Gymn. in Wien*). MITTEIS is *prima facie* in direct opposition to WENGER. The question cannot be discussed here, but it may be mentioned that S. RICCOBONO has published a vigorous defence of MITTEIS's point of view with a translation of his lecture in *Annali del Sem. Giur. di Palermo*, 1928.

In pursuance of the same idea the *Literaturübersicht* also deals with a number of works lying strictly outside the scope of the present bibliography, thus W. OTTO's *Kulturgesch. des Altertums* (1925), Italian works treating of the general problems of ancient legal history, particularly E. CARUSI's and the lively controversy they have excited, R. TAUBENSCHLAG's *Das rom. Privatrecht zur Zeit Diokletians*, and P. DE FRANCISCI's article (not seen) in *Arch. Giur.*, 1925, *L'azione degli elementi stranieri sullo sviluppo e sulla crisi del dir. rom.* These fall, anyhow, outside our chronological limits; not so M. SAN NICOLÒ's *Die Stellung der Keilschrifturkunden in der vorderasiatischen Rechtsentwicklung* in *Z. Sav.-Stift.*, XLVIII, 21-50. We confine ourselves to Egypt. At the beginning (pp. 21-3) is a welcome summary of the pre-Ptolemaic Egyptian evidence; at the end (pp. 41 ff.) we meet the conclusion that the breaking of the silence which reigns in Egypt at the close of the eighth and the beginning of the seventh century B.C. is no accident, but is due to the reform of the law of contract attributed by Diodorus (I, 94, 5; I, 79, 1) to king Bocchoris. The question is thus raised of Persian influence on Egyptian private law, for example on marriage, as to which see SAN NICOLÒ's article chronicled last year (*Journal*, XIV, 152, IV).

The idea of *antike Rechtsgeschichte* also underlies L. WENGER's *Die rechtshistorische Papyrusforschung. Ergebnisse und Aufgaben*, published in *Archiv f. Kulturgesch.*, XIX, 10-44. The keynote is the central position of Egypt as the battlefield of national, Greek and Roman law. We get the idea of Roman law as a great synthesis, though still Roman, culminating in Justinian. And similarly we must advance from Rome, in Egypt through the Coptic and Arabian periods, to the Middle Ages. This article forms an excellent introduction to papyrology from the juristic point of view.

In the same order of ideas is L. WENGER's laudatory review, in *B.Z.*, XXVII, 407-19, of H. MONNIER's *Les Nouvelles de Léon le Sage* (*Bibl. des Universités du Midi, Fasc. XVII*, 1923). It discusses the question of Roman *versus* Greek and other influences in post-Justinian Byzantine law. As WENGER observes, modern Romanistic research has pushed the question back a stage earlier: how far is the *Corpus Iuris* itself Roman or how far Byzantine? In the post-Justinian period the pendulum swings between Justinian's system and native influences—Balkan, Slavonic, Caucasian, Oriental, etc., but the questions raised are not ripe for solution. WENGER gives a glimpse of the views of the new Greek school. MONNIER's book, however, stands aloof, presenting not a picture of the development, but that of one stage.

A number of reviews of books more or less connected with papyrology may now be mentioned very briefly. A. STEINWENTER's review in *Gnomon*, IV, 65-72, of G. M. CALHOUN, *The growth of criminal law in ancient Greece*, contains a discussion of juristic and philologic cooperation in the field of Greek law; also an interesting contrasting of *Strafrecht* and the Anglo-American conception of criminal law. There is no doubt that the latter is too narrow for historical purposes. In *Krit. Vierteljahrsschrift f. Gesetzgebung*, etc., XXII, 91-7, R. NEUNER briefly notices *Festschr. f. Hanausek* which contains, with other papers, M. SAN NICOLÒ's *Zur Entwicklung der babylonischen Urkundenformen* (*Journal*, XIII, 114) and A. STEINWENTER's *Neue Urkunden zum byzantinischen Libellprozess* (*Journal*, XIV, 155); he also, *ibid.*, 101-8, reviews A. STEINWENTER's *Die Streitbeendigung*, etc. (*Journal*, XIII, 116; XIV, 155), and, *ibid.*, 108-15, E. LEVY's *Der Hergang der römischen Ehescheidung* (*Journal*, XIII, 115). B. KÜBLER, *ibid.*, 213-22, reviews R. MASCHKE, *Die Willenslehre im griechischen Recht*, on which see also W. KUNKEL in *Z. Sav.-Stift.*, XLVIII, 709-22. The connexion of this important work with our province is somewhat remote; less so is E. F. BRUCK's *Toten- teil*, etc. (*Journal*, XIII, 88), which is favourably reviewed by B. KÜBLER next after MASCHKE's book (pp. 222-31) and by A. CALDERINI, picking out the papyrological passages, in *Aegyptus*, IX, 159-60. In *Aegyptus*, VIII, 374-5, A. CALDERINI gives a short notice of the second edition (Naples, 1927) of V. ARANGIO-RUIZ's *Istituzioni di dir. rom.*, a work which owing to its free and profitable use of papyrological material is an exceptionally suitable manual for us.

P. KOSCHAKER's *Neue Keilschriftliche Rechtsurkunden aus der El-Amarna-Zeit* (*Abh. Sächs. Ak.*, XXXIX, v, x+184 pp.) is a study of recently published Assyrian texts of the fifteenth-thirteenth centuries, with some transcriptions and translations. Its notes are rich in comparative law. Thus at pp. 22, n. 3, 35, n. 6, 42, n. 3, 74, n. 1, the forms and system of publication of documents suggest papyrological analogies, at pp. 66, n. 1 and 81, n. 3, a development is noted similar to that sketched by W. KUNKEL (C below) in *catoecic tenure*, at p. 79, n. 1 *res Mancipi* come in for comparison and *usus-marriage* at p. 86, n. 1. There is also an interesting group of notes, with papyrological parallels, on the subject of real security (pp. 101, n. 1, 102, n. 3, 106, n. 5, 113, n. 4), and two notes (pp. 125, n. 4, 128, n. 1) deal with the problematic connexion between real and personal execution.

iii. *Lexicographical.* L. WENGER's *Bericht über den Stand der Arbeiten am Novellenindex (Aus Novellenindex und Papyruswörterbuch I: Sitz.-Ber. Bay. Ak., 1928, Abh. 4)* is noted below, D. i. In *Z. Sav.-Stift.*, XLVIII, 571-2 M. SAN NICOLÒ gives a list of *corrigenda* of the Greek constitutions in P. KRÜGER's *Cod. Iust.* In *Studi Bonfante*, III, 153-62, in an article on *Detention at Roman Law*, MAX RADIN suggests that in the phrase *κληρόνομοι καὶ διάδοχοι καὶ διακράτορες* the last word represents *detentatores* and means "holders by other title," not *bonorum possessores* as indicated by PREISIGKE's *Fachwörter*: see C.T. 11, 20, 6; C.J. 5, 17, 8, 7 a; 11, 70, 5, 2.

iv. *Juristic texts.* Zum sog. *Gnomon des Idioslogos*, aus Emil Seckels Nachlass, herausg. von PAUL M. MEYER (*Sitz.-Ber. Preuss. Ak.*, 1928, XXVI, 424-56), is a selection from SECKEL's papers commenting on the *Gnomon*. The papers are of various dates, none very recent, so that MEYER has had to edit heavily. There is much valuable material both from him and from SECKEL, but in awkward form. We badly need a new edition of the *Gnomon* summarising the results reached by the various studies enumerated pp. 424-5, to which H. STUART JONES, *Fresh Light on Roman Bureaucracy* (Oxford, 1920), should be added. SECKEL's general view is that the *Gnomon* is an administrative instruction for the office of the *Idioslogos*, emanating from Augustus at the end of his reign, to which additions have been made from enactments of emperors,

senate, the praefect of Egypt and the *Idioslogos*, but not directly from *leges, plebiscita, edicta magistratum* (p. 425). The *ius antiquum* (e.g. *ll. Voconia* and *Falcidia*, pp. 431, 440) is taken as known; what is insisted on is the *ius novum* (*ll. Iulia et Papia Poppaea*).

The Gaius fragments of P. Oxy. xvii, 2103 (= O) have been commented on by P. COLLINET in *Rev. hist. dr. fr. et étr.*, N.S., vii, 92-7; by F. DE ZULUETA in *Law Quart. Rev.*, xlii, 198-208; and by E. LEVY in *Z. Sav.-Stift.*, xlviii, 532-49 and *Studi Bonfante*, ii, 277-87. All are agreed that the doctrine of post-Gaian additions in the Veronese palimpsest (= V) has received a serious blow: on this see especially LEVY's first article. With regard to O ll. 47 ff., corresponding to the illegible page of V, opinions vary, particularly in the matter of the restorations from l. 57 onwards. COLLINET in substance accepts A. S. HUNT's proposals; ZULUETA attempts to reconstruct from l. 54 onwards on the lines of the Edict. In his version (*ibid.*, p. 208) the words in *solidum*, l. 58, rightly criticised by LEVY, should be corrected into *in id totum*. The most plausible reconstruction, based on a brilliant conjecture for the gap ll. 59-60, is that of LEVY. This is now printed by B. KUBLER in a supplement to his latest separate edition of Gaius (Teubner, 1928). LEVY's consequent restoration of ll. 62-70, not attempted by the others, is naturally very conjectural, but in his second article, recognising that at l. 70 O must have reached Gaius 4, 73 (Inst. 4, 7, 4c), he establishes the important point that the clauses of Inst. 4, 7, 4b beginning *Licet enim una est actio* had probably no counterpart in Gaius, and thus disposes of the classicality of the famous *duae condemnationes* of that passage.

The new juristic fragment, P. Oxy. xvii, 2089, is dealt with by LEVY in a second part (pp. 549-55) of his first article. He makes a considerable contribution to the recovery of the text, which he holds comes from a classical work, most probably a commentary on the *Lex Iulia et Papia*, the author of which cannot be determined.

v. *Comments on business documents.* Besides the comprehensive articles of P. M. MEYER and U. WILCKEN mentioned above we have only to notice here an important review by W. KUNKEL in *Gnomon*, iv, 659-69, of P. Freib. iii (*Journal*, xiv, 141-2, 152). It begins with a description of contents, agreement being expressed with U. WILCKEN's view (against J. PARTSCH's) that the bulk of the documents are agoranomic, being probably the original official copies, and ends with praise of the merits of the edition. The body of the review deals first with the leases and secondly with the marriage contracts of the collection. Nos. 24, 25, 28, 34 and 35 are leases with a clause acknowledging receipt by lessor of *πρόδομα εἰς τὰ ἐκφόρια*, which justifies their ascription to the class of documents known as *μισθώσεις προδοματικά*. Like V. ARANGIO-RUIZ in the work to be mentioned below under D. i, but independently of him, KUNKEL gives reasons for not agreeing with the generally held opinion that these transactions are in all cases concealed antichrestic loans: etymologically the suggestion of *πρόδομα* is *arraha*. In the second part the reviewer expresses a number of doubts as to WILCKEN's view of the P. Freib. marriage contracts. This depends on the existence in Ptolemaic law of a distinction, copied from the native law, between free and full marriage contracts. KUNKEL shows the difficulty of determining which class of contract documents represent, and doubts the formal opposition *ὁμολογία γάμου* and *συγγραφή συνοικεσίου*. Moreover the doubt extends to the material meaning of the opposition, which is no clearer, at present, than that between *πρᾶσις* and *ἀποστασίον* in sale. [On P. Freib. iii see too § 3, *Ptolemaic*.]

vi. *Diplomatic.* In *Archiv*, ix, 80 U. WILCKEN shows that parts A and B of P.S.I. ix, 1026 (150 A.D.) are the outer and inner versions of a double document of the old type, making with P.S.I. vi, 729 and P. M. MEYER, *Jur. Pap.*, 37, three Latin documents of this type from the Roman period. A. S. HUNT seems to have overlooked the two last-mentioned in his comment on P. Oxy. xvii, 2131 (*Journal*, xiv, 150), but in *Archiv*, ix, 95 WILCKEN confirms HUNT's conjecture that B.G.U. 525 and 970 are the components of a similar Greek document from the same period, P. Oxy. 2131 being the only other known.

In *Z. Sav.-Stift.*, xlviii, 567-70 E. WEISS republishes from G. DAUX, *Bull. Corresp. Hellénique*, I, 226, adding a commentary, a short second century A.D. Thasian inscription, which regulates the tariff at which the *μνήμονες* are to put their books at the disposition of parties wishing to execute a public document. Compare P. M. MEYER, *Z. Sav.-Stift.*, xlvii, 323, 333.

H. STEINACKER's *Die antiken Grundlagen der fruhmittelalterlichen Privaturkunde* (*Journal*, xiv, 150) is favourably reviewed by A. CALDERINI in *Aegyptus*, ix, 162-3; and by H. I. BELL, with more papyrological detail, in *Cl. Rev.*, xlii, 199-200. The former reviewer points out deficiencies in STEINACKER's bibliography, the latter complains of the lack of an index.

In *Beitr. z. antiken Urkundengeschichte II* in *Archiv*, ix, 24-46, E. BICKERMANN confirms the conclusion of his previous article (*Journal*, xiv, 151; P. M. MEYER, *Z. Sav.-Stift.*, xlviii, 594-5) that by the beginning of the Roman period the Greeks of the *χώρα* had been absorbed into the native population. Declarations

or returns (*ἀπογραφαί*) made to Roman officials, unlike petitions, required no answer. The declarant might retain a copy *visuel* by the recipient official, which would prove that a declaration had been made, but was no proof of the truth of its contents. In such cases verification was generally a subsequent duty of the office, of which proof had to be got by copy taken at the local archive. The official receipts of *ἀπογραφαί* of *cernite* (*οἰκογένεια*) form an exception, but this is due to the necessary absence of other documents of title. This general rule applies to *ἐπίκρισις* declarations, but an exception is formed by the group of documents *ἐκ τόμου ἐπίκρίσεων τοῦ δέινος ἐπαρχοῦ Αἰγύπτου*, which have the peculiarities of being officially authenticated, of containing full particulars of identification and of being evidently based on Latin originals. This means that the *ἐπίκρισις* of Roman and Alexandrian citizens was exceptional, and was specially verified. In the *χώρα* the *ἐπίκρισις* was verified only in the census. There we find two exceptional classes, *οἱ ἀπὸ μητροπόλεως* (illustrated by the publication (p. 35) of U. WILCKEN's copy of P. Strassb. Gr. 185) and *οἱ ἀπὸ γυμνασίου*. There were grounds of policy for both exceptions, but both classes, as shown by BICKERMANN's previous article, were under the common law. There follows a study of the Arsinoite *εὐτοεῖ*, who seem to have been the local substitute for *οἱ ἀπὸ γυμνασίου*, and the article concludes with H. I. BELL's copy of P. Lond. 1600 (cf. *Archiv*, vi, 108) which is part of a roll of applications for *ἐπίκρισις* dated 16 Aug. 132 A.D.

Note sul documento esecutivo greco-egizio by A. SEGRÈ come to us in two instalments: *Aegyptus*, viii, 293-334; ix, 3-62. Graeco-Egyptian credit contracts in the *χώρα* almost always contain a clause providing for execution. The oldest form is *πρᾶξις τρόπῳ ᾧ ἂν βούληται*, from about 262 (edict of Ptolemy II) it becomes *πρᾶξις κατὰ τὸ διάγραμμα*, but about 170 we settle down to *πρᾶξις καθάπερ ἐκ δίκης*, which remains common form till 480 A.D. But in Alexandria, which apparently was not under the *διάγραμμα*, this final form appears as early as 252, l. SEGRÈ connects the varying of formulation with changes in the organisation of the tribunals, but he holds that in no case was execution properly levied without a not merely formal judicial decree. Minor variations in the clause depend on the race of the debtor and the nature of the debt, but, if I understand him aright, SEGRÈ attaches little practical effect to the clause, and regards its final form as a recognition of the fact that the execution depended on the general law, not on special contract. The second article studies chiefly the system of execution on the person. This raises the question of privileged classes, which are Greeks, even non-military, citizens of Alexandria, Naucratis and Ptolemais, certain classes of Egyptians, and, later, Romans. The *ἀγώγιμος* clause, the Persian *epigoni* and *epigoni* generally come up for consideration. *Epigoni* are the offspring of Greeks or Persians, originally soldiers, with native women. They were in a special position, as were later the offspring of Roman soldiers and native concubines. Persians united most readily with natives, and SEGRÈ denies that *Π. τῆς ἐπ.* is a *fictio iuris*, the special insistence on this quality in the later Ptolemaic period being due perhaps to a desire to oust the jurisdiction of the *laocritae*. In the imperial period the right of *cessio bonorum* exempted Romans from personal execution. Finally the effect of the *obligatio omnium bonorum* clause is studied, and brought into connexion with the Hellenistic usage of general hypothec so much favoured by Justinian.

Another article by A. SEGRÈ is *ΠΡΑΞΙΣ Ε ΑΠΟΣΤΑΣΙΟΥ* in *Rendiconti Acc. Lincei*, S. 6, iv, 149-61. Basing himself on SPIEGELBERG, he regards the Demotic *π.* as a quittance for price, with declaration of title of buyer, the Demotic *α.* as an abandonment of all right by vendor. Between Greeks in the Ptolemaic period the latter was regularly used for settlement of a dispute, but also in cases in which the seller had not been paid in full. Towards the middle of the first century B.C. *π.* absorbed the formula and legal function of *α.* Thus the Greek sale-contracts of the Roman period comprise both *π.* and *α.* They were a notarial device for combining the effects of the Greek *π.* and *καταγραφή* with those of the indigenous *α.* For, against SCHÖNBACHER, *Liegenschaftsrecht*, pp. 29 ff., SEGRÈ holds that *καταγραφή* and *α.* must not be confounded. The treatment of the subject of the function of *α.* is more lucid, perhaps because less detailed, in V. ARANGIO-RUIZ's book to be mentioned under D. i below.

B. Law of persons.

i. *Corporations*. In *Z. Sac.-Stift.*, XLVIII, 591-3, P. M. MEYER has an important note dealing chiefly with M. SAN NICOLÒ's article in *Ἐπιτύμβιον* (*Journal*, xiv, 151) and certain new documents, especially in B.G.U. vii.

ii. *Status libertatis*. He also points out, *ibid.*, 593, that in B.G.U. vii, 1564, ll. 2-3, of 138 A.D. we have the earliest mention of a sacral manumission in Egypt.

iii. *Status civitatis*. In *Rev. de phil.*, N.S., i, 362-8, E. BICKERMANN, *À Propos des Ἀστοὶ dans l'Égypte Gréco-romaine*, observes in the first place that the designation *ἀσθή* (*ἀστός* is not certainly found) takes the

place of *origo*. Therefore the persons so designated must belong to a particular city, which can only be Alexandria. But *ἀσσοί* are on the one hand connected with the Alexandrian demes, and on the other are in the *Gnomon* distinguished from simple Alexandrians. Now third century B.C. papyri show us Alexandrians not yet admitted to the demes: the demesmen in fact formed a highly privileged class of citizens. Claudius's letter (H. I. BELL, *Jews and Christians*, pp. 23-6) shows that at some later date Alexandrian citizenship had been thrown open very widely, but other texts that *de facto* civic privileges were monopolised by demesmen. Admission to Alexandrian *ephebia* was by descent on both sides, and thus a city aristocracy, with the usual vices, was preserved.

In *Journal*, XIV, 143 we noticed E. CUG's suggestion, made in an article by R. CAGNAT published in *Journ. Sac.*, 1926, 193-202, for the expansion of a formula which is constant in Roman notifications of birth: *q. p. f. c. r. e. ad k.* This suggestion is not considered by H. A. SANDERS in an article in *Cl. Phil.*, 22, 409-13, but he makes another. Starting from *q(uae) p(roxima) f(uerunt)* (A. S. HUNT, P. Oxy. VIII, 1114) and ending with *ad k(alendarium)* (private letter from DITTMANN), SANDERS argues that what is still missing is a claim of citizenship and a verb: therefore *c(icem) r(omunum) e(scripsi)*. The *Kalendarium* was a *tabula proposita in foro Augusti*, as P. Mich. 1766 says. Results would follow both as to the method of keeping this *Kalendarium* and as to the reading of various examples of this class of documents, but U. WILCKEN in *Archiv*, IX, 100-4 gives weighty reasons against SANDERS's very ingenious expansion.

The last echoes of the controversy about the *Constitutio Antoniniana* and P. Giss. 40, I (*Journal*, XIII, 114-15; XIV, 151-2) sound unmistakeably like *non liquet*. J. FLEURY, *Rev. hist. dr. fr. et étr.*, N.S., VII, 268-70, reviews E. BICKERMANN's thesis unfavourably, pointing out that his best argument, the supposed reference to the German victory, is contradicted by Caracalla not describing himself as *Germanicus*. M. A. LEVI, in *Boll. Fil. Class.*, XXXIV, 107-8, on the other hand, is somewhat uncritically enthusiastic. F. HEICHELHEIM, in *Phil. Woch.*, 1928, 1194-7, approves of BICKERMANN's excursus and holds that he has shown the papyrus not to be the *Const. Ant.*, whereas E. HOHL, in *Hist. Z.*, CXXXVII, 364-5, says that what BICKERMANN has shown is that the *Const. Ant.* was not limited in its Egyptian application as P. M. MEYER had originally supposed. This last is also L. WENGER's view in *Die Rechtshistorische Papyrusforschung* (above A. ii), pp. 37 ff., and one cannot but agree with him that GINO SEGRÈ's construction (*Journal*, XIII and XIV, II. c.) is far from impossible. P. M. MEYER himself however, in *Z. Sav.-Stift.*, XLVIII, 595-7, sticks stoutly to his original views: BICKERMANN's completions are "willkürlich und ausgeschlossen," while R. LAQUEUR's [αδ]ε[λ]φ[ικίων] does not deserve consideration. In connexion with LAQUEUR's religious argument we may draw attention to U. WILCKEN's note in *Archiv*, IX, 94, raising the question of the dating of P. Oxy. XVII, 2128.

The continuation of E. BICKERMANN's *Beitr. z. antiken Urkundengesch.*, mentioned above under A. v, comes also under the present heading.

iv. *Status familiae*. *Di un glossema in Gaio I, 140*, 12 pp., Turin, 1928, is a pamphlet by G. GROSSO arguing that the words *num quodammodo—recipit* are a gloss. The question is of the *pf.*'s right to remancipation in the course of emancipation, whence a short mention of P. Lips. 40 (MEYER, *Jur. Pap.*, 9), where we find remancipations to the *pf.*: but these are after first and second mancipation of a daughter, a point which the writer seems to overlook. It is hazardous to draw legal conclusions from such a document.

In *Archiv*, IX, 93 U. WILCKEN notes that P. Oxy. XVII, 2111 (about 135 A.D.) contains an appeal by a woman to the *Lex (P)Laetoria*. In *Z. Sav.-Stift.*, XLVIII, 602 P. M. MEYER draws attention to B.G.U. VII, 1662 of 182 A.D., as containing the earliest example of a *civis Romanus*, with *ius liberorum*, acting as guardian.

Marriage. See W. KUNKEL's article mentioned above under A. v.

C. Property.

W. KUNKEL's article in *Z. Sav.-Stift.*, XLVIII, 285-313, *Über die Veräusserung von Katoecienland*, is highly successful in drawing, with the aid of new documents, conclusions as to the origin of the alienability of catoecic lands. The new documents (B.G.U. VIII, 1731-40, of which 1734=B.G.U. VI, 1261 and 1735=B.G.U. IV, 1186, and 1734 and 1736 are here edited) are agoranomic, probably originals, of two kinds: *ὁμολογίαι* and oaths. The former express assent (*εὐδοκεῖν*) to an already accomplished *μετεπιγραφή* on the catoecic register from alienor to alienee of catoecic lands which alienor has ceded (*παρακεχώρηκεν*). The oaths are confirmatory of such *ὁμολογίαι*, though oath and *ὁμολογία* in the same transaction have not been found. The consideration (*ἀνθ' ὧν*) consists in every case of advances (*ἐχρηστίαι*) received by the alienor for the purpose of meeting catoecic dues, and KUNKEL regards the present transactions as *datationes*

in solutum. Here we have the first germ of alienability of such lands, which developed later than their heritability. It is that the State, faced with the alternative of a wholesale resumption of catœcic lands for non-payment of dues and the granting of permission to the tenants to alienate to other *catœci*, chose the latter course. The terminology of sale is avoided, and it remains avoided even in Roman times, when catœcic lands had become private property. The question of alienability depends on the relative importance at a given date of the *παράχωρησις* and the *μετεπιγραφή*. This excellent article ends with a discussion of SCHÖNBAUER's and PARTSCH's theories of *καταγραφή* and with an interesting study of the oaths. See the notice of P. KOSCHAKER's *Neue Keilschriftliche Rechtsurkunden* above under A. ii.

H. I. BELL in *Studi Bonfante*, III, 61-7, *A Family Dispute concerning Hypothecation*, edits with introduction, translation and notes, P. Lond. Inv. Nos. 1983 and 1977 of 168 and 173-4 A.D. Three members of the Antinoopolite family of Heraclides-Valerius, known from other London papyri, dispute over a slave jointly owned by them. One of them has hypothecated the slave; he claims to have hypothecated only his own share, but the others charge him with having dealt with the whole property. The ground of their suspicion may be that the creditor is in possession, presumably by delivery from the hypothecator; but even so, the title of the other two should not be affected, though their position might be *de facto* more difficult. Anyhow the hypothecator is confident that he can produce a document showing hypothecation of only a third, in which case the creditor's action is not even colourable. A question of fact rather than of law.

W. KUNKEL's article *Municipatio* in PAULY-WISSOWA's *Realencyclopädie* should be noted.

D. Obligations.

i. *General*. In *Lineamenti del sistema contrattuale nel diritto dei papiri*, Milan, *Università Cattolica*, 1928 (?), viii+90 pp., V. ARANGIO-RUIZ sketches the contractual law in Egypt with special reference to its Greek side. Chapters 1 and 2 reveal a general point of view in sympathy with L. WENGER's *antike Rechtsgeschichte* and P. COLLINET's Byzantinism of the *Corpus Iuris*. The simple description in chapter 2 of the kinds of memoranda of contracts is welcome, but as a palliative of its doctrine of Byzantine subjectivism W. W. BUCKLAND's *Diligens Paterfamilias* in *Studi Bonfante*, II, 87-108 may be recommended. The remaining chapters deal with outstanding features and problems of various contracts, namely, sale of land, hire, loan, *receptum nautarum*, *foenus nauticum*. The whole book is vividly written, its constant reference to economic and general history serving to sustain interest.

L. WENGER, *Aus Novellenindex und Papyruswörterbuch. I. Bericht über den Stand der Arbeiten am Novellenindex*; with specimen entries for ἀγαθός, ἄγραφος, ἀδιάθετος, ἄγω. II. ΑΓΡΑΦΟΣ in den Rechtsquellen (Sitz.-Ber. Bay. Ak., 1928, 4, pp. 15-107). This second part starts as a study of ἄγραφα, i.e. business transactions concluded without writing, based on the Index of Justinian's Greek Novels in preparation at Munich, of which the article ἄγραφος had been given as a sample in I, p. 12 (add ἔγγραφος, p. 83, and ἐγγράφω, pp. 89-90), but the study spreads out first to the rest of the *Corpus Iuris*, then to the papyri, and finally to inscriptions, always however with sole reference to Hellenistic and Byzantine law, to the exclusion of Roman, Greek and oriental law. The subject is unwritten contracts, wills, lawsuits, administrative acts, not νόμος ἄγραφος in the usual sense. A first result is that ἄγραφα are seen to remain important all the time: *quod non est in actis non est in mundo* is not true, except in a literal sense for the modern papyrologist, who may be tempted to overlook ἄγραφα. A second is that ἄγραφος means simply not in writing, i.e. oral or implied by conduct: e.g. γάμος ἄγραφος is nothing but a marriage for which there has been no written contract, and γάμος ἔγγραφος does not mean a registered marriage. PREISIGKE's *Fachwörter* is thus corrected. There is a good summary at pp. 100-2.

ii. *Sale*. From G. CORNIL's *Die Arrha im justinianischen Recht* in *Z. Sav.-Stift.*, XLVIII, 51-87, we pick out the points specially concerning us. The bibliography, pp. 52-4, should be noted. At p. 55, n. 1, we have mention of *arrha* in contracts of service in the papyri, pp. 69-74 on sale in Greek law make use of papyrological evidence, and at pp. 77-9 SCHÖNBAUER's and SCHWARZ's views come in for criticism. The writer's general conclusion is that the penitential function of *arrha* is a myth. In pre-Justinian practice it served both as evidence and as an agreed penalty, but did not confer a right of withdrawal. No doubt the aggrieved party could choose between *arrha* and damages, but the practice of taking high *arrha* made the choice unreal. The only *locus poenitentiae* to be found in Justinian (C. 4, 21, 17. Inst. 3, 23 pr.) lies in the preliminary stage of a contract intended to be in writing, where no *arrha* has been given.

P.S.I. VIII, 965 (cent. 4-5) contains, according to A. SEGRÉ's commentary, a reference to Diocletian's edict of 301 *de pretiis rerum venalium*, showing that that edict applied to the whole empire, and not merely

to the eastern provinces. U. WILCKEN in *Archiv*, IX, 71, agrees, and P. M. MEYER in *Z. Sav.-Stift.*, XLVIII, 633, reproduces the text.

See also above under A. vi.

iii. *Lease*. See above under A. v.

E. Procedure.

P. Petrie III, 25 (MITTEIS, *Chrest.*, 30) is a second century B.C. processual document which MITTEIS pronounced unintelligible in default of an advance in its reading. An explanation was attempted in *Archiv*, VI, 355 ff., but now G. VON BESELER in *Z. Sav.-Stift.*, XLVIII, 585-6, proposes new readings, which are confirmed by H. I. BELL, *ibid.*, on revision of the original, and are welcomed by U. WILCKEN in *Archiv*, IX, 62. O. GRADENWITZ in *Aegyptus*, VIII, 335-6, makes conjectures for the completion of another Ptolemaic processual document, P. Tor. 13 (MITTEIS, *Chrest.*, 29; U.P.Z. I, 118). That of $\delta\acute{\iota}\alpha\ \pi\rho[ογρ]άμματος\ \acute{\alpha}\nu\eta\gammaορευ-μ\acute{\epsilon}\nu[ο\upsilon]$ in l. 20 is considered by U. WILCKEN in *Archiv*, IX, 62, who appears to regard $\delta\acute{\iota}\alpha\ \pi\rhoογρ\acute{\alpha}\muματος$ as certain.

P. Oxy. XVII, 2104 gives a rescript of Alexander Severus. In *Z. Sav.-Stift.*, XLVIII, 586, P. M. MEYER points out that this is the same rescript as that quoted by Paulus, l. 20 *resp.* D. 49, 1, 25, and he develops his observation in *Studi Bonfante*, II, 341-4. Meanwhile U. WILCKEN independently makes the same identification in *Archiv*, IX, 90. We combine the two. Except that the Digest abbreviates the prescript and omits the last four lines (15-18) of the papyrus rescript, the two copies show only one small textual variation, *viz.*, l. 7 D. $\delta\piοτε$ for $\deltaτε$ and l. 8 *om.* $\piοτε$. Here with WILCKEN the Digest is to be preferred. From the fuller prescript WILCKEN infers the date of the *epistula* to be 222, and he accepts A. S. HUNT's 241 as the probable date of its incorporation by the prefect Annius (ll. 19-21) in his *commentarii*. MEYER thinks 241 too long after Severus's death, and would alter the restored year-number in l. 20 from 4 to 12 or 13. The last four lines of the rescript, omitted by the Digest, are in a bad state. They evidently dealt with the right of a person accused on a capital charge to appeal to the emperor, the right claimed by St Paul. MEYER's completion of ll. 15-16: $[ὁ\ \piενθύνους\ \deltaν]τας$ is better than WILCKEN's $[ἐκκαλου-μένους\ (?)...]τας$.

The Cyrenean Edicts of Augustus, published with 5 plates by G. OLIVERIO in *Notizario archeologico del Ministero delle Colonie, Fasc. IV* (Milan-Rome, 1927), throw light on a number of fundamental points, among which the procedural are prominent. Their general importance perhaps justifies a bare bibliography here. A. NEPPI MODONA in *Aegyptus*, IX, 146-51, reviews OLIVERIO's edition as an edition, favourably, but with interesting criticisms. J. G. C. ANDERSON in *J.R.S.*, XVII, 32-48, gives full texts with commentary and partial English translations; A. VON PREMERSTEIN in *Z. Sav.-Stift.*, XLVIII, 419-531, full texts, German translations and an important commentary. Papyrological matter will be found at pp. 434, 452, 465, n. 1, 466, n. 1, 468, nn. 1 and 2, 470, n. 3, 471, n. 1, 472 and n. 3, 477, n. 1, 482, n. 2, 503, n. 2, 510, 528, n. 3 *i.f.* An article by V. ARANGIO-RUIZ is promised in *Riv. di Fil.*

The new documents on libellary procedure cited and commented on by P. M. MEYER in *Z. Sav.-Stift.*, XLVIII, 629, should be noted. See also the account of A. SEGRÉ's articles on the execution clause in contracts given above under A. vi.

F. Public Law.

U. WILCKEN, *Zur Propositio Libellorum* in *Archiv*, IX, 15-23. Here WILCKEN defends, successfully one must hold, the doctrine developed by himself in *Hermes*, LV, 1 ff. out of MOMMSEN's *Gordians Dekret von Skaptoparrene* (*Jur. Schr.*, II, 172) that from the time of Hadrian *scriptio* to a *libellus* was not notified to the petitioner by return to him of the original or a copy, but that he was left to take a properly attested copy from the bundles of *libelli* hung up in an appointed place: *ex libro libellorum propositorum*. In support of his view WILCKEN cites two new documents: P. Oxy. XVII, 2131 of 207 and P.S.I. IX, 1026 of 150. A. VON PREMERSTEIN's article *Libellus* in PAULY-WISSOWA's *Realencyclopädie* appears to agree in substance with WILCKEN's doctrine.

E. GRUPE, in *Z. Sav.-Stift.*, XLVIII, 573-5, makes it probable that the Latin original of the *epistula Claudii* to the Alexandrians, P. Lond. 1912, published by H. I. BELL in *Jews and Christians in Egypt*, pp. 23-6, was composed by the emperor himself. The argument consists mainly of stylistic parallels with the *oratio Claudii de iure honorum Gallis dando* (BRUNS, *Fontes*, 52).

See also the note on P. Oxy. 2104 given above under E.

7. PALAEOGRAPHY AND DIPLOMATIC.

U. WILCKEN, in an article *Zur Propositio Libellorum* in *Archiv*, ix, 15-23, replying to DESSAU's *Zur Inschrift von Skaptopara* (*Hermes*, LXII, 205 ff.), discusses the procedure followed in making petitions. He adduces parallels to the phraseology of the inscription from papyri.

A note in *Cl. Rev.*, XLII, 4, states that SCHUBART's *Griechische Palaeographie* has been "highly praised" by C. J. KRAEMER in the *Cl. Weekly* (New York), March 12, 1928—so far inaccessible to me.

From *Lit. Zent.-Bl.*, Dec. 24, 1927, I see that A. H. SALONIUS in his edition of P. Berol. 13236 (*Ein Thukydidespapyrus. Soc. Scient. Fennica, Comm. hum. Litt.*, II, 2) discusses "das Verhältnis zu den mittelalterlichen Handschriften." I have not seen this.

F. X. J. EXLER's *Form of the ancient Greek Letter* has been reviewed by H. M. HUBBELL in the *Cl. Weekly*, Oct. 10, 1927.

F. G. KENYON, in an article on *The Papyrus Book* in *The Library*, VII, 121-35, deals with the use of papyrus for books and the size and format of rolls and codices. He gives some statistics as to the popularity of the codex-form at various periods. A useful summary of the information on the subject.

Shortly before sending this section to press I heard of K. OHLY's *Stichometrische Untersuchungen* (*Zentralblatt für Bibliothekswesen*, Beiheft 61), Leipzig, Harrassowitz, 1928, pp. x+131, but have not yet been able to see it. [See also § 3.]

8. LEXICOGRAPHY AND GRAMMAR.

MOULTON and MILLIGAN's *Vocabulary of the Greek Testament*, Part VII (by G. MILLIGAN), covers the section σαβωθ—Τυχικός (pp. 567-646). PREUSCHEN and BAUER's *Griechisch-deutsches Wörterbuch zu den Schriften des Neuen Testaments* (see *Journal*, XIII, 118) is reported to be completed and is reviewed with praise by A. DEBRUNNER in *Theol. Lit.-Z.*, LVIII, 541-2. Another work of a lexicographical character, H. LEISEGANG's *Indices ad Philonis Alexandrini opera*, pars I (a-ζ), = vol. VII, part I, of the edition of Philo's works by COHN, WENDLAND and REITER, is reviewed by W. CRÖNERT in *Gnomon*, IV, 570-7. A number of articles on particular words have appeared. L. WENGER has discussed ἀγραφος in an article which I have not seen [see § 6, D. i]. In *Eranos*, XXV, 214-16, D. TABACHOVITZ renders ὅσα περ ἄλλα ἡμῖν αἰεὶ in P. Oxy. 1469. 22, "cetera omnia quae debemus" and ἐπειδὴ αἰρεῖται ἐμοὶ τε καὶ τῷ νῖῳ κτλ. in P. Oxy. 1627. 7, "cum ego et filius Th. sequenti anno munere octo mens[i]um perfungi debeamus." I am less attracted by the same writer's proposal to read in P. Lond. I. 77. 34 f. (pp. 231 ff.) = Mitteis, *Chr.* 319, καθὰ ὁ προλαβὼν ἐσαφῆνισεν ὁ ἔπος "ut prior pars orationis explanavit" [see § 9 below]. In the same volume of *Eranos*, p. 283, H. FRISK wishes to read in P. Oxy. 130. 18, παρακαλῶ καὶ καθικετεύω for π. κ. κατικελεύω, comparing παρακαλῶ καθικετεύων in P. Lond. v. 1677. 39, and proposes to recognise in place of εἰ δ' αὐτὰ in P. Oxy. 942 the word εἰσαντα=εἰσαντικά (formed like πάντα). In *Aegyptus*, VIII, 357-8, A. GODINA has collected passages in the papyri in which καλός means good. An Utrecht dissertation by M. DE VRIES entitled *Pulloke* (Amst. 1927) is reviewed in *Museum*, XXXV, 155-7, by E. VAN HILLE. From *J.H.S.*, XLVIII, 125, I learn that E. ORTH, *Logios*, Leipzig, Noske, 1928, pp. ix+108, is a history of the word λόγιος, with a chapter on papyrus usages. A great deal of miscellaneous lexicographical information is contained in the review of Part III of the new Liddell and Scott by W. SCHMID in *Phil. Woch.*, XLVIII, 609-18, 641-59. Parts II and III of Liddell and Scott have been reviewed by P. MAAS in *Gnomon*, IV, 289-91, Parts I and II by P. KRETSCHMER in *Glotta*, XVI, 188-90, and Parts I-III by F. MÜLLER in *Museum*, XXXVI, 57-60. For WENGER's *Aus Novellenindex und Papyruswörterbuch* see above, § 6, D. i.

Several grammars and grammatical dissertations have appeared. I have not seen F. M. ABEL, *Grammaire du grec biblique suivie d'un choix de papyrus*, Paris, Gabalda, 1927, 1 vol. 8°, xl+415 pp. From the reviews by P. F. REGARD in *Rev. ét. anc.*, XXX, 229-31 and J. B. CHABOT in *Journ. Sav.*, 1928, 248-9, I gather that it is a rather full descriptive grammar of the New Testament, with incidental references to the Septuagint (3200 references to the N.T., as compared with 750 to the LXX), followed by the texts of about 20 papyri. Nor have I seen Mgr. JAQUET, *Grammaire du grec du Nouveau Testament*, Paris, de Boccard, 1927, 1 vol. 8°, 165 pp., which is reviewed by P. F. REGARD in *Rev. ét. anc.*, XXX, 231-2, and seems to be of an elementary character. H. S. DANA and J. R. MANTEY, *A Manual Grammar of the Greek New Testament*, London, S.P.C.K., 1928, pp. xx+356, Cloth, 12s. 6d. net, which I have seen, is intended for beginners in New Testament Greek. The authors are Americans. H. PERNOT, *Études sur la langue des Évangiles*, Paris, Les Belles Lettres, 1927, is known to me only from the review by A. DEBRUNNER in *Gnomon*, IV, 441-5. PERNOT's study is said to be of interest for his comparison with Modern Greek usage.

L. RADERMACHER'S *Neutestamentliche Grammatik* (2^{te} Aufl. Wien, 1925) is reviewed at length and rather unfavourably by W. CRONERT in *Gnomon*, iv, 74-91. The last paragraph of the review includes the following: "R.s Werk ist als Lehrbuch weder für Theologen noch für Philologen brauchbar.... Als Beispielsammlung bringt es demjenigen, der nachzuprüfen und zu sichten versteht, reichen Stoff und manche Anregung." E. MAYSER'S *Grammatik der Griechischen Papyri aus der Ptolemäerzeit*, II, 1, is reviewed by G. GHEDINI in *Aegyptus*, VIII, 361-3, and by F. M. ABEL in *Rec. Bibl.*, 1927, 435-9. M. JOHANNESSEN, *Der Gebrauch der Propositionen in der Septuaginta*, Berlin, 1926 (= *Nachr. von d. Ges. d. Wiss. zu Göttingen*, Phil.-hist. Kl. 1925, Beiheft, pp. 167-388), is favourably reviewed by P. THOMSEN in *Phil. Woch.*, XLVIII, 451-3. R. C. HORN, *The use of the subjunctive and optative moods in the non-literary papyri*, Philadelphia, 1926, 8°, pp. 175, is a thesis for the doctorate. A. H. SALONIUS, *Zur Sprache der griechischen Papyrusbriefe*, I Die Quellen, pp. 41, Helsingfors, Akad. Buchhandlung, Leipzig, Harrassowitz, 1927, I know only from the reviews by A. S. HUNT in *Cl. Rev.*, XLII, 148-9, and by R. HELBIG in *Phil. Woch.*, XLVIII, 1579-80. D. GROMSKA, *De sermone Hyperideo*, Leopoldis, Gubrynowicz et filius, 1927, pp. 100, which is noticed in *J.H.S.*, XLVIII, 282, is not yet accessible to me.

According to GERTRUD REDL the style of Isidore of Pelusium in his letters suggests that he was "ein im Sinne seiner Zeit gut durchgebildeter Sophist," a "Redekunstler und Redelehrer." This view is supported by the evidence of his wide reading of classical authors. The letter III, 57 is in its form a διδασκαλική ἐπιστολή. A number of parallel passages are cited. *Isidor von Pelusium als Sophist*, in *Z. f. Kirchengesch.*, XLVII, N.F., x, 325-32.

The accentuation found in literary papyri is touched upon in the *Report of the Committee on Greek Accentuation* which has appeared in the *Proceedings of the Classical Association*, 1928, 60-9. A new and apparently large work by B. LAUM, *Das Alexandrinische Akzentuationssystem unter Zugrundelegung der theoretischen Lehren der Grammatiker und mit Heranziehung der praktischen Verwendung in den Papyri*, Paderborn, 1928, 8° (*Stud. z. Gesch. u. Kultur d. Altertums*, iv *Ergänzungsband*), has not yet come into my hands.

The Egyptian proper names occurring in COLLART, *Les Papyrus Bouriant*, are analysed by K. FR. W. SCHMIDT in pp. 170-81 of his review of that work in *G.G.A.*, cxc. The Egyptian fish-names used by Greek writers are collected and discussed by D'A. W. THOMPSON in *Journal*, xiv, 22-33. I have not seen W. SPIEGELBERG'S article *Zu dem Namen Manetho* in *O.L.Z.*, XXXI, 649-50. B. MEINERSMANN'S work on Latin words and names in the papyri (see *Journal*, XIII, 118; xiv, 156) is reviewed by A. STEIN in *Phil. Woch.*, XLVIII, 230-5, and by G. GHEDINI in *Aegyptus*, VIII, 363-4, in both cases rather unfavourably. A short notice, with a few critical notes on points of detail, is contributed by F. ZUCKER to the bibliography in *B.Z.*, XXVIII, 179-80.

9. GENERAL WORKS, BIBLIOGRAPHY, MISCELLANEOUS NOTES ON PAPYRUS TEXTS.

The translation, as before by L. R. M. STRACHAN, of DEISSMANN'S latest edition of his *Licht vom Osten* has appeared, with the title *Light from the Ancient East*, London, Hodder and Stoughton, 1927, pp. xxxii + 535, 85 illustrations.

P. COLLOMP has published an introduction to papyrology, mainly in the form of bibliography. It appeared in the *Bull. de la Fac. des Lettres de Strasbourg*, v, 89-98, 129-35, 171-8, under the title *La papyrologie*, but has now been reprinted as a separate work by Les Belles Lettres, at 6 fr. [I have been unable to see this reprint.] It is reviewed by M. HOMBERT in *Rev. Belge*, VII, 1044-5; P. COLLINET in *Rev. hist. dr. fr. et étr.*, 1928, 468-9 (brief notice); W. SCHUBART in *Hist. Z.*, CXXXVIII, 666 (brief notice); A. C[ALDERINI] in *Aegyptus*, VIII, 379-80; and J. P. W. in *Bull. Bibl. et Péd.*, XXXII, 66.

I know only from a rather severe notice by M. H[OMBERT] in *Chronique d'Égypte*, 1928, 138-9, a popular introduction to papyrology in Esperanto by JULIUS PENNDORF, *Grekuj Papyrusoj*, Berlin, 1927.

M. HOMBERT has begun in *Byzantion*, III, 520-46 a useful *Bulletin Papyrologique*, of which two instalments appear, together covering respectively the years 1925 (to p. 535) and 1926 (pp. 536-46). In this (p. 541) HOMBERT refers to a bibliography by G. CARACI, *Gli studi italiani sulla storia dell' Egitto dopo Alessandro Magno. L'Opera degli Italiani* (Rome, 1926), pp. 40-55.

P. CLOCHÉ publishes, under the heading *Histoire grecque 1925-6*, a critical bibliography of the subject in *Rev. historique*, CLVII, 308-43. [The part containing it is at the moment not accessible to me.]

Since the last appearance of this bibliography two new instalments of the invaluable bibliography in *B.Z.*, as usual containing a section on papyri, have appeared: *B.Z.*, XXVII, 420-80, XXVIII, 170-237.

G. VITELLI has published a number of notes on miscellaneous papyri, chiefly suggestions for readings. The non-literary texts concerned are: P. Lond. 753, Cornell 2, 6, P.S.I. 74, 948, 33, 2117, 199, 972, 1026, 1059, 1051, Lips. 10, 40, S.B. 6262, Flor. 384, 64, Oxy. 2113, 2150, 1772, U.P.Z. 78, Garrett Dep. Coll. 7541.

Reference may be made here to G. CANTACUZÈNE's article in *Aegyptus*, IX, 63-96, on the *pridianum* published by HUNT, which is noticed under § 3.

G. VON BESELER and O. GRADENWITZ in *Z. Sac.-St.*, XLVIII, 585-6, communicate some new readings in the important text P. Petrie III, 25, which help materially in the understanding of the document. WILCKEN comments favourably on their article in *Archiv*, IX, 62.

GRADENWITZ in U.P.Z. 118 suggests Θα[σ]ῆς in l. 10 and in l. 20 διὰ πρ[ο]γρ[α]μμ[α]τος ἀνηγορευμέν[ου]. WILCKEN in *Archiv*, IX, 62, approves these readings, which he says that a facsimile in his possession confirms, except for ἀνηγορευμένου, about which he is doubtful.

Reference may here be made to WILCKEN's *Zum Germanicus-Papyrus* (in *Hermes*, LXIII, 48-65), for which see § 4, *Administration*. For readings and extension of abbreviations in the birth certificates of Roman citizens see § 3.

D. TABACHOVITZ publishes two notes on the reading or interpretation of papyri. The first relates to the well-known P. Lond. I, 77 (the will of Abraham), where he proposes to solve the much-discussed crux in l. 35, ἐσαφήνισε νοεπος by reading it as ἐσαφήνισεν ὁ (l. τὸ) ἔπος, the clause meaning "as the preceding text has shown." A. H[EISENBERG] justly points out in *B.Z.*, XXVIII, 180, that this is very improbable; he himself says, "es wird...ἐσαφήνισεν λόγος zu lesen sein." If this is meant as a correction of the text it may pass, though it is a little difficult to understand how λόγος could be corrupted into νοεπος, but as to the actual reading νοεπος doubt seems impossible. I venture to suggest an alternative explanation, which, so far as I recollect, has not been put forward before, but which seems to me far likelier than either of the foregoing. May we not suppose an accidental omission, due either to copying from an abbreviated draft or to a mere slip of the pen and read ἐσαφήνισεν ὁ ἐπ[ὶ] (ἰσκόπ)ος, the sense being "as the bishop my predecessor specified"? In this case it is best to refer the words only to the clause ἔτι μὴν καὶ...πολυτέλους; i.e. the εὐκτήριον had apparently been bequeathed by the previous bishop to Abraham and was now bequeathed by him to his disciple Victor, who succeeded him in the government of the monastery; it was presumably a sort of perquisite of office. In the second note TABACHOVITZ, very convincingly, explains αἰρέω in P. Oxy. 1469, 22 and 1627, 7 as "fall to the share of" someone. *Ad Pap. Lond.* I 77, 34 and *Ad Pap. Oxyrh.* XII 1469, 22 et *Oxyrh.* XIV 1627, 7, in *Eranos*, XXV, 214-15 and 215-16. For suggestions by H. FRISK on P. Oxy. 130, 942 in the same volume of *Eranos* see § 8 above.

In *Phil. Week.*, XLVIII, 417-18, B. OLSSON also refers to the Abraham papyrus, pointing out that οὐκ ἔχω...ἕως ἐνὸς τριμησίου means "I have not even 1 tremis."

10. MISCELLANEOUS AND PERSONAL.

WILCKEN in *Archiv*, IX, 61-2, calls attention, with cordial approval, to GRADENWITZ's proposed "Konträrindex," which I mentioned in the last instalment of this bibliography (*Journal*, XIV, 157).

The "Fondation égyptologique Reine Elisabeth" is described in an appreciative article by WESSELY, *Das Brüsseler Heim für ägyptologische Studien*, in the Vienna *Reichspost*, 15 Apr. 1928, 21-2.

A report by the late Prof. KELSEY on the American excavations at Karanis, with translations of the two letters of Apollinarius, has appeared, under the title *Fouilles américaines à Kom Ousim (Fayoum)*, in *C.-R. Ac. Inscr. et B.-L.*, 1927, 81-90, 1 plate.

A. VOGLIANO reports the results of BRECCIA's excavations for the Società Italiana near Behneseh in 1927-8, when some valuable literary papyri were discovered (see above, § 1); *Gnomon*, IV, 455.

The scheme of publication of the Giessen papyri (*Journal*, XIV, 157) was changed, GLAUBE's part appearing as Heft II (see § 2), while KLING's, which was to have formed Heft II, will come later. I learn from Prof. KALBFLEISCH that the University Library has received, as a gift, a considerable accession of papyri, chiefly documents of the Roman period. Prof. VITELLI tells me that it is hoped to publish the second part (with the indexes) of P.S.I. IX in the spring of this year, and Dr. KIESSLING that vol. III of the *Wörterbuch* is in the press.

Obituary notices of COMPARETTI by A. CHIAPPELLI (*Rend. Acc. Naz. Linc.*, S. VI, III, 357-78), of GRENFELL by P. M. MEYER (*Z. Sav.-Stift.*, XLVI, 806-7), and of HOGARTH by H. R. HALL (*Journal*, XIV, 128-30) have appeared. WENGER publishes a bibliography of the obituary notices of MITTEIS in *Archiv*, IX, 107.

NOTICES OF RECENT PUBLICATIONS

La Magie dans l'Égypte antique de l'Ancien Empire jusqu'à l'époque copte. By Professor FRANÇOIS LEXA. Paris, Paul Geuthner, 1925. Two vols. and atlas of lxxi plates.

In this work Professor Lexa provides an exhaustive treatment of a subject which has hitherto received from scholars only a small part of the attention which it deserves. In the *Hastings Encyclopaedia of Religion and Ethics* Dr. Gardiner laid the foundations for future treatment of Egyptian magic, and Professor Lexa tells us in his introduction, p. 14 (4), that when his attention was drawn to Gardiner's article during the printing of his own work, he found that the two treatments were in agreement, both scholars having started from the same basis.

The introduction of Vol. I deals with the nature and definition of magic in general and of Egyptian magic in particular. Chapter I gives a general classification of the aims of Egyptian magic, dividing the spells into three main classes, those intended for this earthly existence, those intended for the future life, and those whose object was to establish communication between this world and that of gods and departed spirits. Chapter II is a detailed study of the means and methods of magic, and occupies the greater part of this volume. In Chapters III-IV larger questions are discussed, the relation between magic on the one hand and religion and science on the other in ancient Egypt. After devoting Chapter V to the rôle played by magic in Egyptian literature, the author passes on to a similar discussion of Coptic magic, and in Chapter VII and supplement concludes by discussing the relation between Egyptian and Greek magic in the Graeco-Roman period, and the survival of Egyptian magical methods in Europe even up to the year 1872. A complete bibliography is given throughout, and constant references are made to translations of selected magical texts which are contained in Vol. II and cover the whole period of Egyptian history down to the eleventh cent. A.D. These translations amply illustrate every phase and interpretation of Egyptian magic which the author brings before us. The plates contained in the atlas are excellent and there are full indices, compilations so necessary to a work of this kind, but often so inadequately done or altogether left undone.

In close connexion with Professor Lexa's work should be read those portions of Miss Blackman's book *The Fellāhīn of Upper Egypt* which treat of magic among the modern Egyptians, especially with reference to spells relating to fertility and the protection of mother and child, possession by evil spirits, and the use of various kinds of amulets, where many illuminating analogies are to be found.

The account given by Professor Lexa (Vol. I, 46) of the reasons why magical power was ascribed to language from the earliest times, and the sections on suggestion (I, 53), the "corps subsidiaire" (I, 75 ff.), and the use of proper names (I, 113 ff.) are especially admirable, but there are one or two criticisms which we crave pardon for making.

In pp. 103-104 the author accounts for the burning of incense when, by some magical means, gods or departed spirits are to be called up, by saying that, since the perfume of incense was always supposed to accompany an Egyptian god, the erroneous conclusion was reached that gods (or spirits) could be summoned by incense smoke, just as evil spirits could be driven away by burning some repulsive mixture. In the case of magical rites this is possibly true, but we must modify his statement that it was for this reason that religious rites in honour of gods began with the burning of incense, and that fumigation with incense formed part of the funerary ceremonies. Certainly the censuring of the king in the House of the Morning not only purified him but also brought him into contact with Horus, Thoth, Seth, Sepa and their *kas*, and also with his own *ka*, but the primary idea behind the burning of incense before the cultus-statue of a god was surely that of fumigation and purification before the god in question partook of the ritual meal which was served up to him soon after. (See A. M. Blackman, *Rec. trav.*, xxxix, 45-6 and 48.) Similarly, the use of incense in funerary ceremonies such as that of Opening the Mouth (which he cites I, 103, ref. to Pl. liv, fig. 89), though probably containing some notion of contact with the supernatural dead, was the prelude to the offering of a repast. Again, in the passages in the Piankhi stela to which he refers (I, 103-4) there is surely no proof of his statement: "Après la prise d'une ville, on repousse les dieux vaincus et on évoque les dieux égyptiens par la fumigation de l'encens." The first passage to which he refers (Piankhi 97) simply means that by fumigation Piankhi cleansed Memphis and its temple after the rebels

had made use of them, while the second (Piankhi 102-3) records the accustomed use of incense, referred to above, when making offering to a god, in this case Rê (and again further on, when the king is purified in the House of the Morning). Another cogent reason for the burning of incense in temple, funerary, and other religious rites, was the belief that this substance was "the sweat of the god" (probably Osiris. Cf. A. M. Blackman, *Zeitschr. f. äg. Spr.*, I, 71-5). Thus through the incense-smoke both gods and dead persons were imbued with divine force.

On pages 91-2 we are given to understand that the heart, together with the other viscera, was removed from the body during mummification, and that the heart-scarab was put in the body to take its place. This is a mistake often found in text-books; the heart was not removed from the body, but always left *in situ* attached to the great vessels, unless careless manipulation had severed it. In such cases it was replaced in the body and not wrapped up with the other viscera. (See G. Elliot Smith and W. R. Dawson, *Egyptian Mummies*, 145-6.) The heart-scarab, however, which is found either on or within the mummy, was certainly intended, as Professor Lexa says, to replace the heart in the judgment before Osiris, and secure the deceased's acquittal.

The boundary between religion and magic is always a shifting one. The author, in his introduction, discusses other attempts to define magic, and himself presents us with a new one. His arguments are carefully reasoned, but suffice it to say in this short review that we feel far from satisfied that the boundary between religion and magic has been properly established, or even that it is possible to do this to a satisfactory degree. At any rate a complete revision of terms and a much longer treatment is required before definite conclusions are to be reached.

The translation of selected magical texts, which range from the Pyramid Texts down to the life of Shenoute, and the story of Solomon and the Queen of Sheba, are of a high standard. In the preface to this volume the author states that he has intentionally allowed himself, for the reader's sake, greater freedom in translation than is usual, and he has been singularly successful in combining this freedom with accuracy. There is, however, no authority for hazarding for the difficult words *n3 n 3put nt wnt nt Dhwt* in Papyrus Westcar the rendering "ces charmes du dieu Thowt" (II, 188). For the latest, and certainly correct, interpretation of this passage see Gardiner, *Journal*, XI, 2 ff.

But these few defects do not in any way seriously mar the excellence of Professor Lexa's work as a whole, and we heartily welcome it as a scientific study and a valuable book of reference.

ALAN W. SHORTER.

Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings. I. The Theban necropolis. By BERTHA PORTER and ROSALIND L. B. MOSS, B.Sc., Oxon. Clarendon Press. pp. xviii and 212. 1927.

A recent reviewer of this book in an important periodical has made a startling discovery, for which, I am sure, he will retain sole credit. He has found a way in which the two ladies who are responsible for the volume could better have employed their time! I can conceive of none, and though the task they have so admirably executed is one of those which are generally styled "ungrateful," it is one which, more than almost any other they could have undertaken, will ensure them the gratitude of every Egyptologist, living and to come. Time has been lavished on it—lent on it, rather: for the expenditure will all come back in the time and annoyance saved to any serious worker in this field, who, when he desires to check the accuracy and fulness of the data on which he is working, can call up, by the use of this magic wand, all the dead or absent witnesses who have studied them before him, in as many minutes as it would have taken hours previously. Many years of labour have been spent, no doubt. But it has not been realised, probably, that, by the addition of two or three more, the knowledge we have of the texts in temples, tombs and stelae down the whole valley of the Nile from Meroë to Pelusium will have been tabulated and made easily accessible. So far it is the rich necropolis of Thebes which has been thus card-catalogued, and this sample of the whole affords a most satisfying Pisgah-view of the Promised Land. For a bibliography, useful when roughly complete and correct, is invaluable when no such adverb need be used to qualify it. There are omissions and errors, no doubt; but they are needles in the proverbial hay-stack, and fully redeemed by the inaccuracies which the authors have, over and over again, been able to locate in the books and manuscripts which are their raw material, and to rectify. Considering the mass of records which is dealt with here, their deceptive similarities, and the inaccessibility of the sites where, in case of difficulty, the final query had to be put, the volume might compete with the best of its kind for accuracy and exhaustiveness.

Its appearance is not badly timed in the course which Egyptology has run. Competent annual bibliographies of the science in this and other countries enable us to control what is being published, so that, with the references to all published material prior to 1927 in our hands, we may have courage to keep future contributions under control. The days of "Gleanings," "Pages from my note-books," etc., are nearly over, and the duty of clearly defining a subject of study, and of completing it within the limits set, will be more and more constantly observed. The increasingly high standards of accuracy and documentation will more and more tend to make the sprawling amateur and the slovenly scientist extinct fauna. Hence the fact that this book must take 1927 to 1930 as its artificial limit, whereas books flow on for ever, is no disparagement to it. It is our task to make it out of date by producing works, with its help, of such sort as completely to replace all previous studies and copies.

If an addition to this Bibliography could have been wished for, it would be the very difficult one of an authoritative estimate of the comparative value of the sources here quoted; so that the inexperienced student might be guided towards the most reliable of the many witnesses before him, especially those of early date, when there was as yet no tradition and no common method. Each had his personal failings and foibles; each his disabilities in mechanical equipment for travel, for recording, for reproducing and for publishing. In some cases two witnesses are not really independent; in others there are reasons why a witness is more reliable at one time and place than at another. Much of this can be determined, and if a competent judge could sum it up, it would be of considerable value.

Attention ought to be drawn to the immensely increased value which has been given to this volume by the inclusion amongst its references of manuscript collections preserved in libraries, museums, and private hands, such as the unsurpassed accumulations of Hay, Wilkinson, and Burton. By this severe interpretation of their mission the authors, when their volumes are complete, will have placed a key to these treasure-houses in the hands of scholars, who henceforth may escape the mortification of finding that the lacuna they deplored in their material could have been filled from these inaccessible sources.

The authors, as is evident from the preface, have already received a gratifying tribute to the value of their work in the help that has been rendered them in their difficult task by experts in the field and elsewhere. Such assistance is not wont to be given in this measure and with this readiness save to those who have merited it, and from such it is rarely withheld. The invitation of the authors to furnish them with a notice of all observed errors, with a view to their correction in a future volume of the series, delivers the reviewer from the unpleasant, and in this case difficult, rôle of devil's advocate.

N. DE G. DAVIES.

Catalogue of the Literary Papyri in the British Museum. Edited by H. J. M. MILNE, B.A., Assistant Keeper in the Department of Manuscripts. London, 1928. Published by the Trustees.

The publication of the *Catalogue of the Literary Papyri in the British Museum* by Mr. Milne (assisted by Prof. Crónert) is an event of great interest and importance. I have never discovered any means (short of studying all papyri in all libraries) by which a worker could proceed. One can find a papyrus of whose existence and whose number one knows at several libraries: but if one does not? And if one is not certain of one's precise requirements? Can one trust, for instance, a librarian to distinguish an Anthology, or to separate Tragic and other Iambi? Of one librarian I know who with much shrugging of the shoulders denies the existence of about 300 uncatalogued papyri in his charge.

Mr. Milne's welcome catalogue dispels, for the British Museum, all these difficulties. Papyri are given with a list of most recent or important editions; though perhaps it would have saved space to give references only to such researches as seriously affect the text of the papyri concerned. There are of course a few omissions. No. 97 (P. 1984) was printed at the end of Crusius' *Mimambi*. Crusius actually saw the papyrus at Oxford and added a fragment which has since disappeared. The reference to Wilamowitz' article on Cercidas' *Meliambi* is *Sitzb. Berl. Ak.* 1138 (not 58). These are the only serious errors or omissions in notices of the few papyri on which I have worked.

There are several papyri collated and edited either wholly for the first time or more fully than before. To these much interest attaches. Many of these, with one important exception are plausibly identified, though I should prefer to regard 194 (P. 1847 A) as part of a speech of Lysias rather than of a novel, and 195 (P. 1862 B) reading *.ῖει δολίας . . . πόντον | ἄνδρα . . . νεότητα | πόντον . . . ἔλειπε τόδε . . . κ.τ.λ.* as part of an (early?) elegiac poem rather than a mixture of prose and verse. Efforts at supplementation and correction are creditably few, and the main ground on which I would criticise Mr. Milne, whose work on some papyri (notably 59=P. 2054) is beyond all praise, is that he has no confidence in

metre and not even a fair English schoolboy's (I am thinking of the last century) knowledge of prosody. Even among German professors (other than those professing *Metrik*) there are several who are his superiors; but I doubt if Prof. Crönert be of this number. A few more glaring instances will suffice. Mr. Milne can have no warrant for foisting ποτ' ἔμαρτε διώκων (instead of -ποτε μάρπτε) on an unknown epic poet (38, p. 32) (*cf.* p. 48, l. 10, etc.); and when p. 57, v. 20, Mr. Milne says "one would expect" (at the beginning of an iambus) ὑμέναιον Ἀχαιοί one really wonders if he has any right to poke fun at Dioscoros of Aphroditopolis. In 60 (589 A) attributed to Poseidippos, though, in view of such portions of the title as are legible, other poets must have come in this anthology, several improvements are easy. v. 4 might be δῶρα δ' Ἀχαιμενιδῶν, v. 13 must be δίψα[ν] δ' οὐκ ἀκέσεσθε ποτῶ, v. 17 cannot be ἱεροθῆς ἀθανατῶν but might be θεόν or θύόν, and v. 16 might well be, not the mysterious αἰθροπτεῖν but μακροβ[ί]ων ὑπὸς Αἰθιόπων. So with Parthenius 64 (Add. MS. 34473, Art. 4) in v. 11 εχοι ουτ αλλοι is clearly τοιοῦτ' αλλοι, in v. 2 καὶ ὄφρα σ[] must be καὶ ὁ φρασσ[], in v. 10 γε τε must be γ' ἔτε[, while Mr. Milne needlessly heightens the mystery of some misplacement of order by reading as ἡρείφθη μένος what looks to me like λαίλα[π]ι ρεῖ φθίμενος and as φηνσεκεύθει what was τῇλέ σε κεύθει. v. 21 has the interesting reading ἐγ[κ]ουράδι δροίτης (Hesch. s.v. *κουράς*) not *κουρλαί*. So remarkable are the deficiencies of the editors in metrical knowledge—apart from manifest evidences of haste—that I venture to deal at greater length with two papyri of special interest. In the first place, despite many conflicting suggestions, the editors' treatment of 53 (P. 1568 c) is unsatisfactory. The recto is in Tragic iambi, ὡς παρδάλεις | εἰς ἔω | τεῖναν | δέμας and πολε]μίον = - πέρη being inconceivable in the Ionian iambic; flaws in dialect fatal to metre like λεῶ and ὡς for ὥστε are numerous; while as to other flaws of dialect (ἐνοικούντων, γενῶν, θάρσυνεν, etc.) one wonders what is Mr. Milne's explanation of the same poem being written by the same scribe in flawless Ionic on the verso and in wholly incorrect Ionic on the recto. We have of course a Tragic ῥῆσις on some battle on one side, and some story of *incubatio* (ἐγκατέδραθεν v. 2 (Milne) and δεμν]ίους ἐγκλιθεῖς) on the other. Whether it is by Simonides may be doubted since we have quite clearly ἄ κρεία in line 5 whereas S. has the long syllable even at the end of a word before mute and liquid, except once where τοὺς δὲ δύστηνοι νόσοι φθείρουσι θνητῶν is, as a variant shows, an error for τοὺς δὲ δύστηνοι βροτῶν φθ. νοῦσοι. In line 8 I seem to see ὕπνος [δ' ἄ]λαστον. Clearly we have an ordinary Iambic (Choliambic) anthology. But the deficiency of the editors to which I have called attention appears most strikingly in 52 (P. 2208) which I transcribe as I read it, profiting by their readings. (Professor Crönert in *Philologus*, LXXXIV, 157 sqq. sinks still deeper into error.)

A. ΚΟΡΗ. 1 ἐπα]είρατε σῶξματα μαινόμεναι
καὶ μὴ καθυβρίξ[]ετε τρόπον ἐμόν·
τί περὶ σφύρα μουξ δέμας ἔβαλετε;
ἐμέ, σύγγονε βάρξ βαρε, πΑρακαλεῖς;
5 ἰκέτις, τροφέ, ναί, ξπέπτωκας ἐμοῦ·
φιλάδελφε πρόνοιξ α, λόγων ἀνέχη;
πειραζομένηξ βασανίζΟμαι.
οὔτω τί [θεὸν σ]αίνεις θεμένη;

v. 2. τρόπον, i.e., my humanity: treat me as an equal not as a God.

v. 4. σύγγονε appears to be the father, v. 5 the nurse, v. 6 the sister. That the characters are so carefully introduced seems to point to a solo in which one singer changes parts. So, too, do the equal divisions of 32 feet, 32 feet, 30 feet and (?) 32 feet.

v. 8. There is no difficulty here, but as we have only a verb in -αίνεις and the object of θεμένη is lost we are left with "Why do you— (me?) so —ingly?" Literally hundreds of guesses are possible.

vv. 2-8. Note that the anapaests admit (a) the spondee, and (b) one irrational syllable, which I indicate by a capital letter, in the last two feet; it does not admit the dactyl as substitute.

B. ΤΡΟΦΟΣ. 9 ναὶ καὶ πρόσωπα τύπτει
10 καὶ πλοκάμους σπαράσ<σ>ει.
νῦν ἔμαθον ἀληθῶς
ὁ [πλ]εῖον οὐ ποθεῖς με
ἐλ<Ε>οὔσα τι λέξαι. οτι P. correxi. με non μετ P.
ελθουσα P.
ἔδει με λιτανεῦσαι με σε P. correxi.
15 καὶ οὐ παρῆν ποεῖν <τι>
ποεῖν πάντα κελεῦσαι.

v. 9. *τύπτει* 3rd Indic.

v. 12. *μετελθοῦσα* Crönert contra metrum. The papyrus is whole and there is no upright to the τ. Compare the writing of the final ε of *εβαλετε* v. 3. v. 14. Or *ἔδει σε* with *ποεῖν με* in 15.

vv. 9-16. The verses are of a type very familiar in the *Anacreontea*. They are iambic dimeters catalectic.

C. ΑΔΕΛΦΗ. 17 *θρήνον ὑπερθεμένη* ξ λέγε *παρθένη* · ξ μήτινα *ποθεῖς* ;
εἰπέ, *κόρη*, *φανερῶς* ξ *ἀλγυδάνα* · ξ *μηδένα* *φοβοῦ* ·
εἰ θεός ἐστιν ὁ σὰς ξ *κατέχων* *φρένα* [s, ξ οὐδέ] ν *ἀδικεῖς* ·
20 *οὐκ ἔχομεν γενέτην* ξ *ἀγριώτατον* · ξ *ἡμερα* *φρόνει*
καὶ καλός ἐστιν ἔφη ξ *βος ὁ σὸς τάχα*, ξ *καὶ σὺ δὲ κἀλλή*.

v. 18. *μηδ' ἐμέ* pessime Milne, Crönert: it would mean "do not fear even me." Incidentally the v. is quite clear. v. 19. Suppl. Crönert. *καίουκ* P.

vv. 18-21. Note that the spondee is rarely used and the third caesura marked. Contrast *Coll. Alec.* p. 199.

D. ΚΟΡΗ. 22 *ἐπικωμάζει* ξ *καὶ μεθύει*,
κοινῆς δὲ φέρων ξ *Ἀφροδίτης* ποθον *Αφροδείτης* P.
πόθον αὐτὸς < *ἄνευ* > ξ [*συνε*] *φήβων*
25 *ἄγρυπνον ὑπὸ κάλαμον* ξ *ἄνομα λέγει*.
καὶ τοῦτον ἐὼ · ξ *βραχύτατον ἦν*
ἀνόμημα, πάτερ · ξ *γινώσκω*
ἔτερον δὲ λέγω ξ [*νέον*] *ἔτερον*
παρὰ παννυχίσιν ξ *ω ω ω* .

v. 22. "Knocks at (my) door in a drunken state." v. 23. *κοινῆς* "like all men."

v. 24. *αυτος* Milne non dispicio: num *ἄωτος*?

v. 25. *ἄνομα λέγει* "makes dishonourable proposals."

v. 27. Or *ἀλίτημα*. *θύγατερ* Crönert metri, ut solet, oblitus.

E. ? ΠΑΤΗΡ. 30 ≈ ≈ τΟ *κατελθών*.
ἔπι

vv. 30-31. The reading is very uncertain.

I fear that Mr. Milne and his colleague, despite their extreme ingenuity in places, have not done anything to rival work like that of Prof. Hunt. But the value and importance of the whole book are beyond question.

A. D. KNOX.

Papyrus grecs, publiés sous la direction de PIERRE JOUQUET, avec la collaboration de PAUL COLLART, JEAN LESQUIER. (Institut Papyrologique de l'Université de Lille.) Tome premier, Fascicule iv. Paris, Ernest Leroux, 1928. Pp. 265-311; 12 plates.

This fascicule concludes vol. I of the Lille Papyri. It contains only the additions and corrections, the indexes, with a table of the papyri, and the facsimiles. Many years have passed since parts I and II appeared, and some of the papyri are in places extremely difficult to decipher, as a glance at the excellent and very welcome facsimiles will show. Hence it is not to be wondered at that the "Additions et corrections" are fairly numerous. It is useful to have them collected in one place; and moreover they have been checked by the editors with the papyri before them, while those which an examination of the originals failed to confirm have been rejected. The list is therefore authoritative. The editors are to be congratulated on the completion of their heavy task.

H. I. BELL.



Statuette, in painted limestone, of a private person *Scale $\frac{5}{16}$.*

PRELIMINARY REPORT ON THE EXCAVATIONS AT EL-'AMARNAH, 1928-9

By H. FRANKFORT

With Plates xx-xxix.

The Society's expedition worked last winter for three months at Armant and for two months at El-'Amarnah. This article, however, deals only with the results of the work at El-'Amarnah, the discoveries at Armant having been made public already in *The Daily Telegraph* of December 11th, January 3rd and 4th, *The Illustrated London News* of July 13th, and in *Notes and News* in the last number of this *Journal*, 107; for a fuller appreciation of this new material further excavations at the Bouchaion, and above all a deeper study of the texts on the stelae and offering-tables which we found, are required.

We arrived at El-'Amarnah about four weeks later than we had originally planned, as it had been considered desirable to continue at Armant almost up to the end of January. The party consisted of Mr. Seton H. F. Lloyd, architect, Mr. and Mrs. J. D. S. Pendlebury, and Mr. Alan W. Shorter, besides Mrs. Frankfort and myself. Our plan was to complete, if possible, the excavation of the northern part of the site, and in any case to advance northwards up to the large villas in the vicinity of the Northern Palace. An unexpected circumstance, however, prevented us from achieving even our minimum programme; as will be explained below we found ourselves suddenly obliged to dig down to the unprecedented depth of 2 to 3 metres in the western part of the suburb proper, so that progress was much slower than had been expected¹. A narrow strip of small houses was therefore still unexcavated when our funds came to an end. It lies between the West Road and the cultivation, in the line of the 36-squares only, and it is unlikely that it will add materially to our understanding of this part of Akhetaten. We give the plan of the suburb provisionally² in Pl. xxii; for its situation within the site as a whole,

¹ Not only was the wady to the north of the suburb so deep, but another very deep spot exists behind the first row of houses to the west of West Road. The wall with the double curve to the south of T. 36. 20, for instance, is a deep retaining wall, starting with a couple of courses on the east but descending for two metres at its western end. It is the investigation of the ancient state of affairs at this point which will require such a considerable time. The most serious consequence of this unexpected delay during the last season was that we had to postpone once more the final investigation and planning of the great Aten temple; I had proposed to do this at the end of the season, in order to give Mr. Lloyd an opportunity of becoming familiar with the problems of the site by dealing with the more regular private house first. For the temple presents extreme difficulties, firstly because it was never finished and contains a number of provisional brick constructions alongside its stone work; secondly it has been wilfully destroyed, either by Horemheb's contractors or by less authorized stone quarriers or by both; thirdly it has already been dug through by Professor Petrie, who dumped the rubbish back from one part into another. Now that the remains have been once more cleared by us in 1926-7 the final work should be done as soon as possible. At the beginning Mr. Glanville spent a week exploring the boundary stelae, and recovered various sculptured fragments. This work is not yet concluded.

² The plan is provisional in that its ten large sheets are not joined with absolute accuracy.

Journal, XIII, Pl. xlv should be consulted. This, in the first place, will show which part of the work was done in 1926-7, when excavation of this part of the ancient town was started for the first time; we then merely followed the southern boundary and cleared a narrow strip to define its extent; from this strip we worked northwards this year until we had reached at every point the wady on the north. Then a very important fact became clear: just as we had found at the southern edge of the suburb that the ancient watercourse had not damaged houses to any extent, and that, on the other hand, no buildings were to be found within the wady as it is to-day, so we found that the wady to the north of the suburb had through the ages maintained its course¹: the houses stopped on its edge, and only a few were somewhat damaged by the water. The houses of the north-western quarter of this suburb stand actually on a terrace, which is reached by an easy gradient from the south, but they stand a full 2 to 3 metres above the ancient level of the wady on its north. The terrace is therefore on the northern side supported by one or more brick retaining walls. These, of course, would be of no use if a powerful stream of drainage water from the eastern desert were to flow out through this wady. But the watercourse, as is shown on the map, is very wide, and nowadays contains at most a few centimetres of water on the rare occasions when it "works"; the brick retaining walls might perhaps be slightly damaged on such occasions; they would suffer from accumulated effects of the water only if neglected.

Now the conclusion to be drawn from these observations is this, that contrary to what had been observed in the south, in the main town, the physical formation of the site where we worked has remained the same since antiquity; it seems even that the edge of the cultivation has not shifted, though this is not yet ascertained with certainty. In any case we have obtained for the first time at El-'Amarnah a complete unit of the town-plan, enclosed between desert, cultivation and two wadys, exactly as it was laid out and built.

When we scrutinize the plan we find the name "suburb," given in the previous season, fully justified. One or two buildings seem to be official; for the rest it is a purely residential quarter, clearly dependent on the adjoining districts. This is particularly obvious in the dominating feature of the town-plan, the two large thoroughfares which run from the south to the north and find no explanation in the suburb itself. We know already that they are to be interpreted as a continuation of the corresponding arterial roads in the main city to the south. But no direct connexion exists, since the great Aten temple intervenes. Yet the West Road is an important means of communication. It connects the main city site with the Northern Palace, and moreover, with the northern entrance of the bay in which Akhetaten was built. (See *Journal*, XIII, Pl. xlv, and *Journal*, x, Pl. xxxvi.) The East Road, however, planned originally as an equally important thoroughfare, was soon used as mere building ground in the absence of much traffic. At the north its exit, apparently from the beginning narrower than the rest of the road because of the projection of the estate of U.35.13, was entirely blocked by numerous middle-class houses. These may well have accommodated the craftsmen who worked on the Northern Tombs, which are easily reached from this point and which, as we know, were on the whole of later date than the Southern Tombs. It will be easy to verify this suggestion when our town-plan has been coordinated with the Survey map on which traces of ancient paths are marked. House U.35.2 was certainly inhabited by a

¹ It has widened, though, towards the north, i.e., on the edge farthest away from our suburb, where it damaged some houses not yet excavated.



Statuette, in painted limestone, of a private person *Scale 1/2*



Portion of the general plan of Akhetaten.
 Square U 36 (200 metres square) and adjacent squares.
 The vertical lines run north and south.

painter, to judge by the large number of pots of paint, a large rough palette and other objects found there.

The blocking-up of the exit of the East Road reduced it to a thoroughfare of restricted local significance: it connected the eastern part of the suburb with the main artery, West Road, by means of the narrow but very straight street. It may be, as Mr. Glanville has supposed¹, that the suburb was a late extension of the town towards the north, called into being by the existence of Akhenaten's Northern Palace farther on: but in any case it seems that the development was either prematurely arrested (by the death of Akhenaten?) or never came up to expectations. For not only does East Road appear to be planned on too ambitious a scale, but the part immediately to the west of East Road was never fully occupied, and contains some estates of considerable size (such as U.36.34 and 48) belonging to houses which are hardly adequate, and seem a disappointing outcome of what was laid out rather grandly. Into this open space and into East Road crowded from the south a very large number of small and poor dwellings². Yet these intrusive houses are too numerous, and not small enough, to be considered servants' quarters. Such are, we think, either the large halls with square brick pillars found on most of the large estates, or the rows of diminutive dwellings such as stretch in a row to the west of V.37.1 or to the east of V.36.5. But the small houses in the west part of East Road are independent of the larger estates. I would suggest that their occupants were connected with what lay immediately on the other side of the wady which borders the suburb in the south: the Great Aten Temple, where the inhabitants of these hovels and cottages may well have filled the numerous minor appointments.

Very remarkable indeed is the north-western quarter of the suburb. A number of large houses stand here close together; no space is lost, or sacrificed to gardens. On the other hand, T.35.6 and 9 own an exceptional number of corn-bins, and the occupant of T.35.11, who also owned T.35.12 and 16, had a number of corn-bins in the last-named building converted into magazines with a greater capacity. The houses themselves have their entrances from the south, from the side of the town, therefore. The corn-bins stand in courtyards directly accessible from the wady, by means of long stairways in the case of T.35.3 and 6 (Pls. xxii and xxiii). Now, as we have seen, the physical formation of this part of the site has not changed these three thousand years. Nowadays the ferry of the village of Et-Till (*Journal*, XIII, Pl. xlv) and the quay where the boats are unloaded lie immediately to the west of these houses. This may have been the case in the days of Akhenaten, and the quarter which we are discussing may well have been a merchants' quarter, where, amongst other staple products, corn was stored: the easiest and most direct way from the quay would have been through the wady, and the corn-bins and magazines were thus placed with great advantage on the terrace at the head of stairs leading up from the wady direct. The bigger houses had their own corn-bins, two generally, sometimes three, very rarely four. Their owners evidently possessed land, either on the opposite shore of the Nile or elsewhere in Egypt. But a good many

¹ *The Mural Painting of El-'Amarna*, 34, with note 1.

² Since this report was written we have found a remarkable confirmation of the architectural argument which led us to believe that this slum quarter is of comparatively late date and intrusive. Of the ring-bezels inscribed with royal names those of Akhenaten are elsewhere by far the most common. Yet in the quarter which we are here considering these are outnumbered by those of his successors. We found only three of Akhenaten—two of these in houses which contained also bezels of Smenkhkare. Of this king we found three, of Ankhnesneferibre one, and of Tutankhamun three, two of which actually bore the "Amun"-name.

mouths remained to be fed in the suburb, which I reckon roughly to have counted 3000 inhabitants.

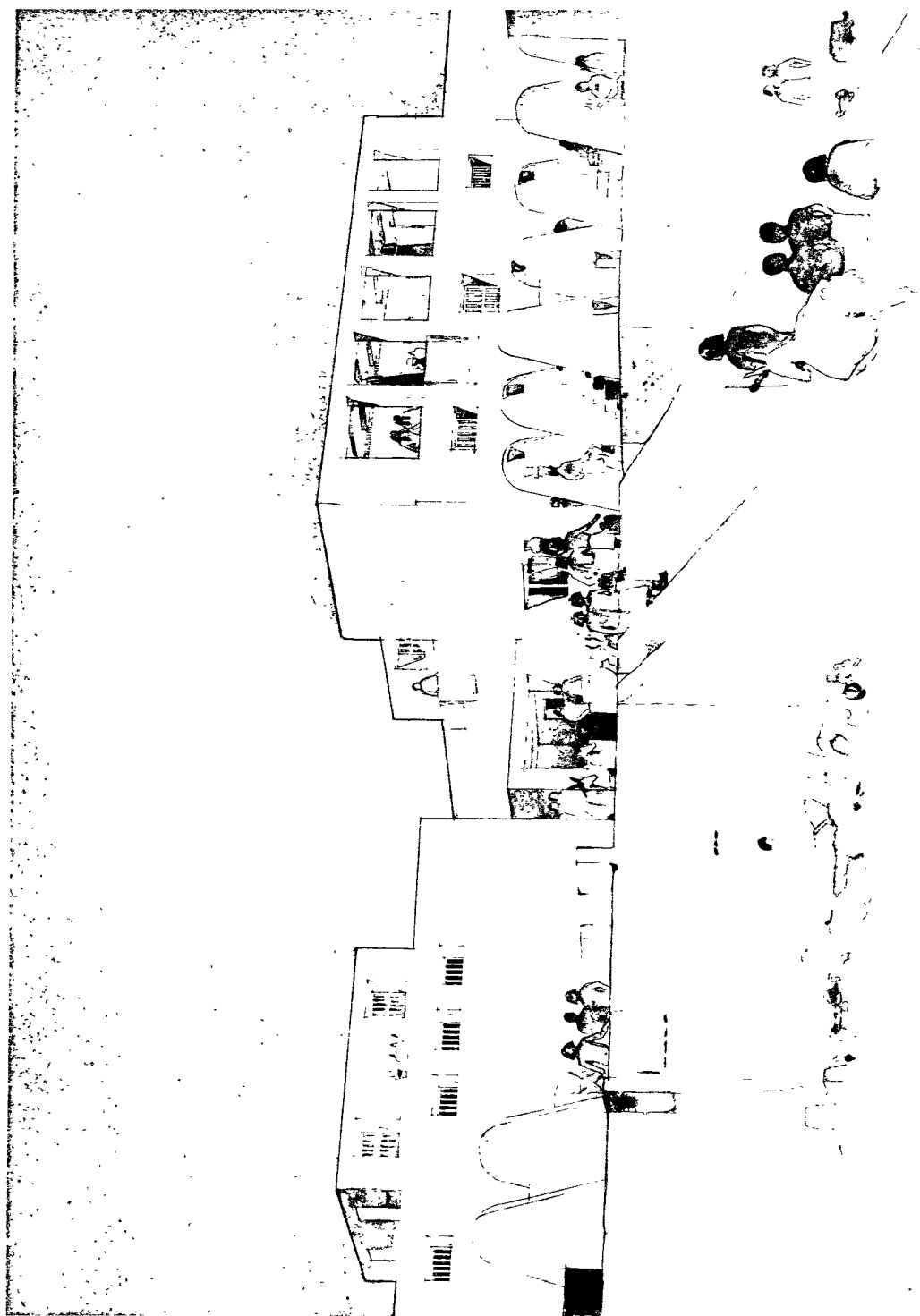
Mr. Lloyd has made a perspective reconstruction of T. 35. 3 and 9 (Pl. xxiii), in which much of our new information on domestic architecture is embodied. We look at it from the north, from the wady, in fact, where we know that the rubbish was thrown down. The corn-bins were filled from the top, small steps being built up against them. The reconstruction of the porter's lodge is perhaps the most uncertain part of the drawing. The houses represent two types, the existence of which is well established at El-'Amarnah. That on the left shows the central room projecting above the rest of the house to receive light through the clerestory windows. The flat roof was surrounded by a parapet or, maybe, was built up high so as to exclude any view on to the roof, which thus served as a closed-in court. The house on the right shows the other type we know. The roof of the central room is partly hidden behind a loggia, which is nothing but the northern part of the flat roof covered over. Already in 1926-7 we obtained evidence that some such construction occasionally existed above the northern part of the house, for we found in V.37.1 the small stone pillar-bases of this roof-loggia exactly where they had dropped down. They were lying in the northernmost room of the ground floor, the so-called "north loggia," where they were covered by large portions of painted plaster which had subsequently fallen from the walls of that room, the ceiling having naturally collapsed first when the house had been deserted for a time and the wood and palm-ribs had decayed.

As to the so-called "north loggia" on the ground floor, we have never found any evidence that it had a large open window¹, though we have been particularly on the look-out for material bearing on this and similar problems. The two houses shown in the reconstruction would have the corn-bins exactly in front of their open loggias, if these existed on the ground floor, which would be absurd. We have therefore given them ordinary grille windows in their ground floor "north loggia." The house V.37.1 also gave us valuable information in this matter, for we found there, in the "north loggia," a dummy window of the ordinary type², which is only explicable if we assume that it continued in a decorative frieze a motive that was actually supplied by real windows placed here and there in the frieze. This arrangement has been adopted in Mr. Lloyd's reconstructed section, shown in Pl. xxiv. Its plan will be found at the right-hand bottom corner of Pl. xxii; but as a further illustration of the disposition of the various rooms we add in Pl. xxv a plan of the largest house found in the suburb, which in its separation of servants and masters, and of public and private parts of the house, is particularly instructive. If we now return to the section of House V.37.1, shown in Pl. xxiv, we notice on the left the entrance porch, with the shallow steps leading up to it and a frame of red mud plaster, crowned with a torus and cavetto moulding and a block pattern, all of which were actually found³. Next is shown the so-called "north loggia" on the ground floor, with its frieze imitating the grille window by bars of applied mud plaster. The doors are painted red and yellow, the door frames red; the door on the left communicates with the kitchen. A frescoed garland was found here. Either this was placed above the door leading to the central room, or two of these garlands existed, one on each side of the door. The frieze probably did not continue on that wall where real windows were impossible. Next comes the central room, with its dais against the wall on the

¹ But see Peet and Woolley, *City of Akhenaten*, I, 20.

² *Mural Painting*, Pl. xxi, and p. 51. A dummy window had not been found before.

³ This reconstruction solves the difficulty referred to in *Mural Painting*, 52. Unfortunately the petal-frieze has been left out between torus moulding and block pattern.

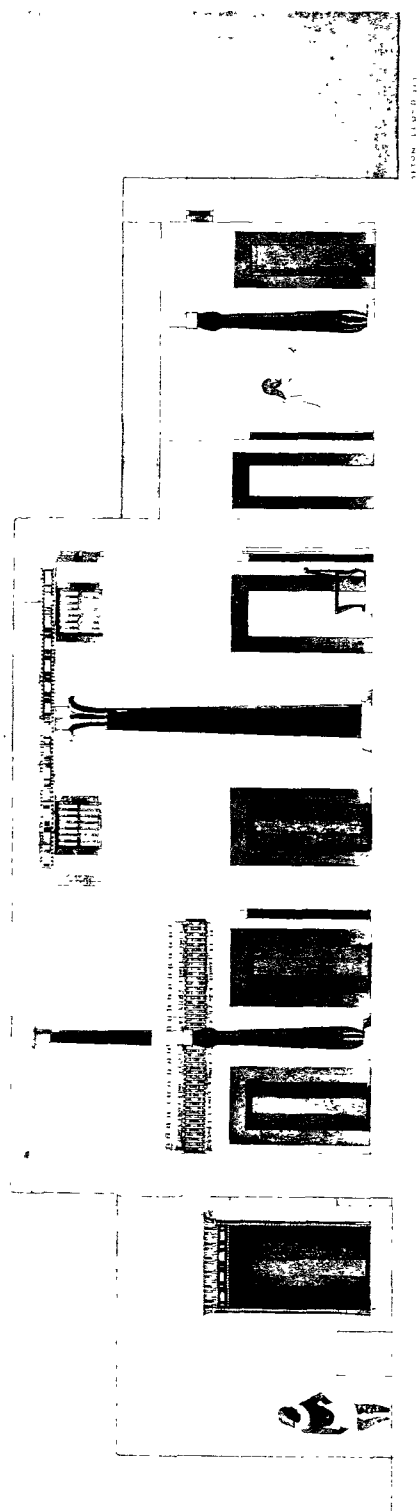


SAYON LLOYD.
BRIAN O'BRIEN DELT 7 29

Drawing, in reconstruction, of Houses T.35.3 and 9,
as seen from the wady to the north of the suburb.

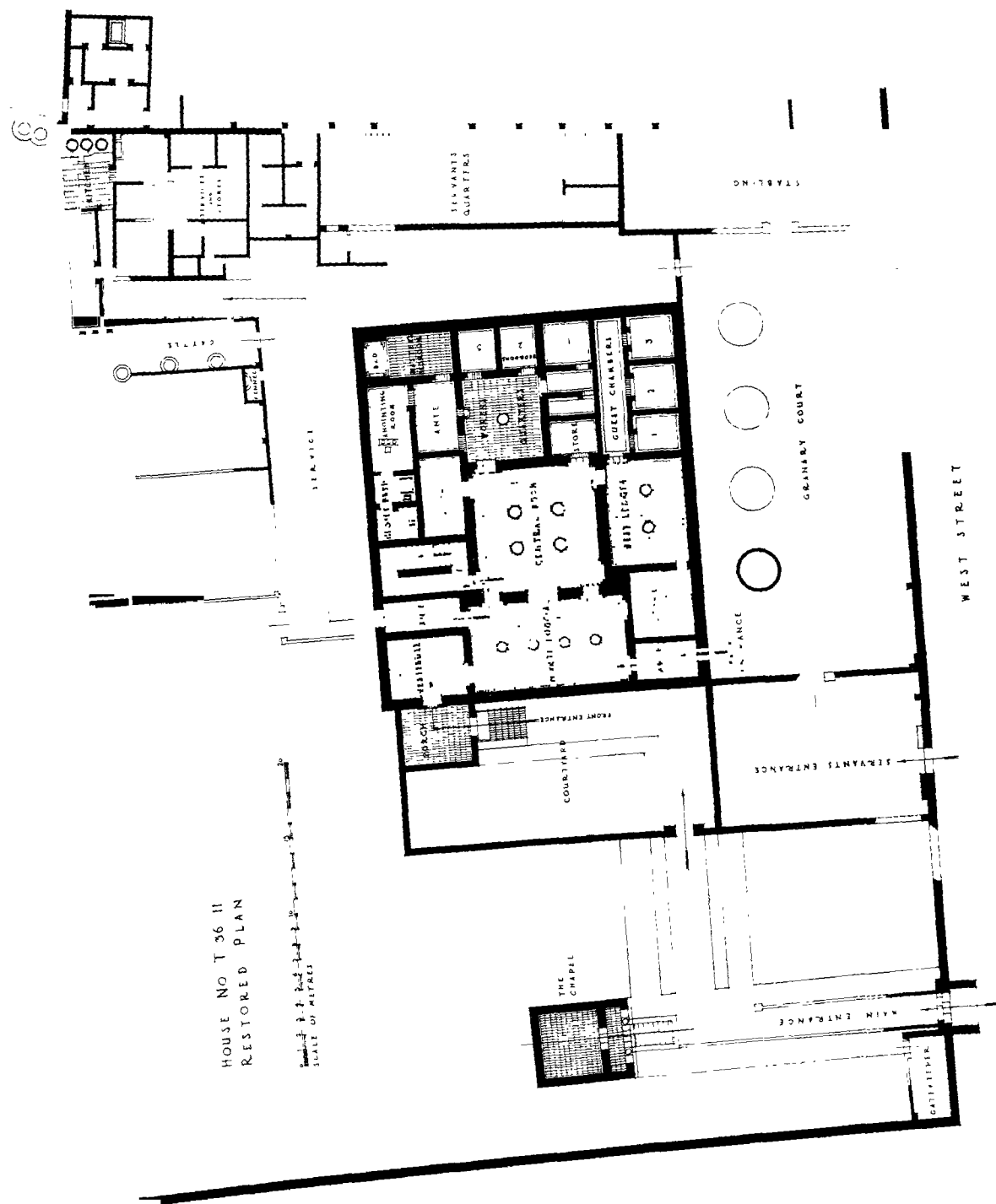
RESTORED CROSS SECTION OF HOUSE NO V 37 I

Scale 1:100



Reconstruction, in north-south section, of House V 37 I.

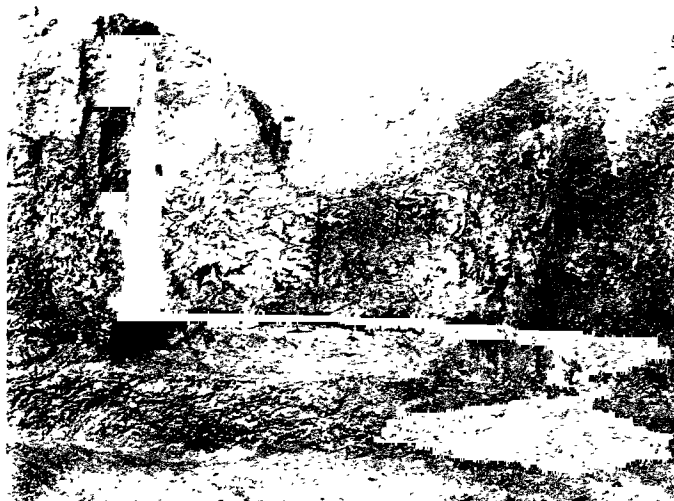
The scale marked is in metres



Restored Plan of House T.36.11.



1



2



3

1. Remains of roofing in the bedroom of U 35.1.
2. Niche in V. 35.6, modelled in imitation of a door
3. Lavatory in the Tax-collector's House, V 36.7

right, and its lustration slab behind the pillar. Behind that wall the stairs lead to the roof-loggia. The roof of the central room is carried by a main beam painted with a block pattern, and rafters painted pink, orange or reddish brown, while the ceiling, reflecting the light which enters through the high windows, is white. White, too, are the upper part of the rafters and their ends where they enter the wall. All these details of the roofing of the houses were established in the past season. The windows, with a grating of stone, or of mud modelled round palmsticks, are set in a frame of red painted mud and are painted red themselves; outside, the windows, like the rest of the house, are whitewashed or mud coloured. To the right of the central room is shown the passage which separates the public from the private apartments, and finally we see the inner or women's sitting-room on the extreme right. The differences between this drawing and earlier reconstructions show how much our knowledge of domestic architecture has increased¹. And surely this is an important matter for the history of civilization. Yet it is only at El-Amarnah that we may hope for further light on these and similar problems, a fact which must once more be stated emphatically as the work at that site is chronically suffering from shortage of funds, notwithstanding its unique importance. Perhaps the value of the ruins of a town which, being an artificial foundation without economic basis, was soon deserted after it was built, will be better understood if it is realized how fragile the material is which gives us our most valuable clues. The accompanying photograph (Pl. xxvi, fig. 1) records one of the numerous stages by which we recover knowledge of essential parts of the Egyptian dwelling which are of necessity lost in every case. Such parts are, in the first place, roofs and second storeys. The only traces which are left are to be found in the painted mud plaster with which walls and woodwork were coated and which survives, though it may crumble at a touch. Thus this photograph shows the bedroom of U.35.1, looking into it from the passage. In the debris, which had not been disturbed since the collapse of the house, are traces of all the rafters of the ceiling. One is just uncovered: the wood only survives as a black powder. The mud coating is intact and shows the colours already enumerated in describing the section of Pl. xxiv. This coating shows that the beam toppled over and is now lying on its side, because on the left-hand side we see what was originally its upper side: on it are still to be discerned the impressions of the *gerîd*, the palm-ribs, which were laid over the rafters to form the roof. A fragment of this side of the beam has been broken off and laid next to it, to show these impressions more clearly. On the right of the beam is shown a flat fragment of white plaster which is from the ceiling proper, *i.e.*, the flat under-surface of the palm-ribs which showed between each successive pair of rafters. The colouring of rafters and of the main beams in the large rooms has already been discussed in connexion with Pl. xxiv. It need hardly be stated explicitly that only very numerous observations, all coordinated, and endless care in the clearing of debris, as soon as the possibility of painted plaster among it arises, enable one to reach conclusions such as are here given. Yet the opportunity to reach such conclusions gives to the work at El-Amarnah a fascination and an interest to which the chance of making finds is entirely subsidiary¹.

Even our finds, however, give reason for satisfaction: we can, of course, only publish

¹ The question as to the origin of the niches in the houses, which some hold for religious, while others see in them a purely ornamental feature used to balance the doors (latest reference: Von Bissing, *Archiv für Orientforschung*, III, 174), seems decided by our discovery in V.35.6 (Pl. xxvi, fig. 2). Here the niche shows, modelled in mud, a detailed replica of a door, consisting of two planks (the joint is indicated in the middle of the door) and turning on one pivot, in the right-hand corner.

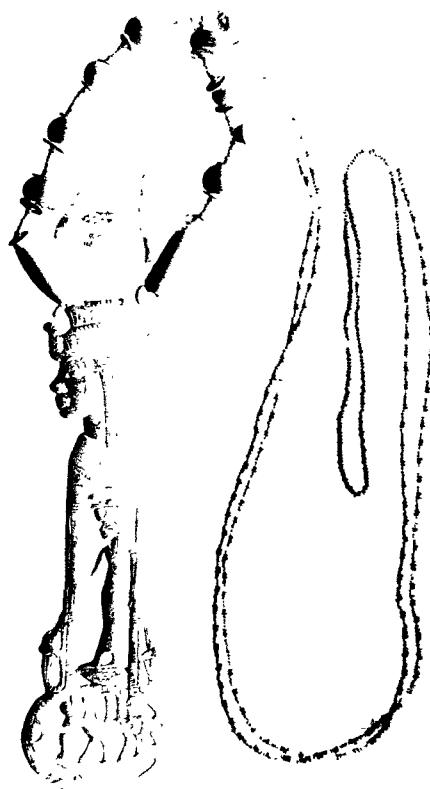
a few of the most important here. As personal adornments we found a bronze *Menat*, beautifully engraved (Pl. xxvii, fig. 1); the face of Hathor recalls the profile of Queen Ty. More important still is the large necklace shown in Pl. xxvii, fig. 2. Every year numerous broken fayence pendants kept turning up in excavations, but now for the first time a complete necklace has been found, and we have succeeded in establishing beyond doubt the sequence of the concentric rows: at the top there were cornflowers, then poppy leaves, then bunches of grapes, next lotus petals and cornflowers alternately, then dates, green and red, and finally long lotus petals with blue tips. The string had entirely rotted away and, though the sequence of the rows is certain, the spacing by means of the small beads is less so. The string at the back was restored because the lotus petals used there were not only of a different type from the others, but were also found in a cluster together in such a way as to suggest some such solution as here adopted. The end pieces represent lotus flowers in polychrome fayence. Mr. Glanville has recently dealt with the relation existing between real garlands, their fayence imitations and their decorative use in ceramic and domestic decoration, in *The Mural Painting of El-'Amarnah*. It is interesting to note that eight of these necklaces were found in the tomb of Tutankhamūn, but they were different enough from ours to make it necessary for the Cairo Museum to retain the latter. The point is that they contain, with a few exceptions, pendants of purely ornamental forms, new evidence how short-lived the naturalism of El-'Amarnah was. The extraordinary chance which preserved for us this perfect garland seems to redeem an ancient offence: it was found hidden under a brick in the courtyard of a very poor house (U.36.25), and one is led to surmise that it was stolen from some richer dwelling but that the thief did not dare to display the new finery, and hid it where we found it.

Another interesting object is a limestone toy made to be drawn on wheels. It represents a monkey groom trying to make a large monkey move, while another monkey, with a smaller one between his arms, holds on to the reins. The relative position of the two monkeys in the chariot is sufficiently like that in which Akhenaten and one of his daughters are sometimes pictured in the tombs to suggest that in the harmless shape of a toy some fun was poked at Akhenaten's horsemanship. The monkeys are painted green, with red faces and white breasts. The reins and the details of the chariot are red. It was found in U.35.3.

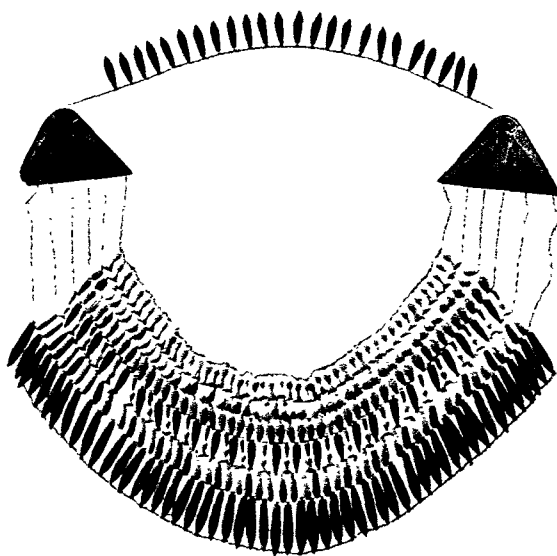
A large number of finds we must pass over, tools, weights (Pl. xxviii, fig. 2)¹, and beautiful fragments of glazed tiles, some with scenes from the marshes, some with decorative designs such as ducks like those used with the mural garlands, or fishes. Then there were an ivory and a stone ushabti, the first a rarity, and the wealthy merchant of T.35.11 owned a beautiful large porphyry stone bowl, of the middle pre-dynastic period. Almost as inexplicable was the presence, in the obscure complex U.35.31, of a

¹ The catalogue numbers of the weights in the photograph are, from left to right: top row, 350, 377, 242; middle, 30; bottom row, 291, 209, 268. Their weights are as follows:

350.	Bronze, bull's head, one ear damaged	7.05 grammes
291.	" " " " " " " "	7.7 "
377.	" panther's head " " " "	10.3 "
(401.	" " " flat, not in photograph.	2.9 ")
209.	Cube of lead, marked with two lines	20.4 "
268.	Haematite " " " " " "	21.25 "
242.	Alabaster " " " " " "	22.1 "
30.	Greenstone " " " " " "	4.15 "



1



2

1. Menat in engraved bronze. *Scale 1/2.*
2. Necklace of fayence beads *Scale 1/2.*



1



2

1. Vase of multicoloured glass. *Scale* $\frac{1}{2}$.
2. Weights in various materials. *Scale* $\frac{1}{4}$.

delightful figure of Bes of steatite, on an alabaster foot: an opening in the head may be either for the feather-headress, or perhaps the figure served as a mirror handle. Pl. xxviii, fig. 1, shows a delicately shaped vase of multi-coloured glass.

Quite by itself stands the small statuette of a private person, rare as such at El-'Amarnah, and rarer still by the exquisiteness of its modelling (Pls. xx and xxi). Note especially the parts round the mouth, and the neck and chest. In the profile we notice that the fashion of shaping the body after the peculiarities of Akhenaten's physique is also followed in this statuette, though it is otherwise a remarkably individual portrait. The chair is rendered in colours, which show the two kinds of wood of which it was made, and even the pegs with which these were joined. The Department of Antiquities, in taking this statuette, gave back to us the one found some years ago by Professor Whittemore and then provisionally retained (*Journal*, XII, Pl. viii).

All these objects were found in private houses. Two structures, however, seem to be public buildings. One was situated to the south of the suburb, in the middle of the wady, and was therefore much denuded. It was certainly not an ordinary house, and I am inclined, provisionally, to see in it a police-station. If anything happened in the northern half of the bay, a runner could reach the station along the shortest route (West Road), and subsequently nobody would be able to pass the wady on his way to the main town without being observed by watchers at the station.

The other is shown in detail in Pl. xxix and can easily be recognized in the plan of Pl. xxii on East Road. Its main feature is the combination of a normal large house and its outbuildings (V.36.7) with a courtyard (V.36.13) of exceptional size, and above all with a remarkable pillared hall (V.36.12). In this hall is a dais, the occupant of which was protected from the importunate cries of those who might crowd round the entrance, kept back by a doorkeeper. At the back of the hall are six large magazines, only accessible from the hall. The arrangement suggests that goods were brought into the hall, shown to an official on the dais and then stored under his supervision in the magazines. This is exactly what happens when taxes are paid in kind, as they were in Egypt. Notwithstanding the direct communication between the hall and the central room of the tax-collector's private house, a communication which is the only unusual feature in this house-plan, it seems that special arrangements for the comfort of the tax-collector had to be made in his office for the days when business was too pressing to allow him to leave the hall at all. On the right-hand side of the hall we see, therefore, a lustration room and a lavatory (Pl. xxvi, fig. 3).

It may be objected that we assign a detailed meaning to this extraordinary group without due proof. To this we answer that buildings answering to this purpose must have existed at Akhetaten, and if our supporters will enable us to clear the site completely, we shall then be able to judge whether our interpretation does or does not gain probability when considered in connexion with the town-plan as a whole. It should never be forgotten that most of the labour spent on El-'Amarnah will be lost unless the work be completed and the unique chance to study the organism of an ancient city in its entirety be utilized to the full.

PTOLEMAIC COINAGE IN EGYPT

BY J. G. MILNE

A papyrus in the great collection known as the Zeno Archives throws some light on the old problem of determining the rates at which the Ptolemaic coinages circulated in Egypt: and, as its evidence has not been fully used in the recent discussions of this problem by Dr. A. Segrè¹ and the late M. Théodore Reinach², it may be useful to draw further attention to it. It suggests that the relation of gold and silver as bullion in Ptolemaic Egypt was materially different from what it was in Greece: and, if this is the fact, it would naturally affect the ratio of the metals when coined.

Silver was always scarce, as compared with gold, in Egypt and there is some reason to think that in early times it may have been actually the more valuable metal of the two. However, there is little doubt that, towards the close of the dynastic period, gold was worth about twice as much as silver: Segrè does not think the use of such a ratio in problem 62 of the Rhind Mathematical Papyrus is conclusive, but it would be quite natural in a sum to assume values approximating to those in current use: and a more definite proof is given by a passage in the unpublished B.M. Papyrus 10068, communicated to me by Professor Peet, which, when dealing with certain stolen metal, mentions "2 deben $3\frac{1}{2}$ kite of gold making 4 deben 7 kite of silver." This document is of the Twentieth Dynasty.

Though no later equation seems to have been preserved, it is not likely that the gold value of silver would depreciate under the native dynasties. A good deal of silver was probably shipped to Naukratis by the Greeks, if we may judge from the hoards of archaic Greek coins found in Lower Egypt³; these of course would come over as bullion, since there was no use for coined money in Egypt at this time: and it is noticeable that the hoards are chiefly made up of the issues of the districts which produced silver and put it on the market in the form of coin, while the great commercial centres which were partners in the factory at Naukratis are poorly represented: the currencies of the latter group would have a mercantile value, and so would be less readily consigned to the melting-pot than those which were simply appraised at their silver content. But silver could have been, and probably was, shipped to Egypt as readily under the Twentieth Dynasty as under the Twenty-sixth, and there are no circumstances known which would suggest any alteration in its value between the two periods. Nor would the Persian conquest change the situation to any material extent: Persian sigloi and Phoenician silver coins are found in Egypt, but, like the archaic Greek coins, under conditions which clearly suggest that they were regarded as bullion.

It may be objected that, if the gold-silver ratio in Egypt before its conquest by

¹ *Metrologia e circolazione monetaria degli antichi*, part II, chap. III: this contains references to earlier articles.

² *R. E. G.*, xli (1928), 121-196.

³ For details, see S. P. Noe, *A Bibliography of Greek Coin Hoards* (New York, 1925), where the hoards are indexed.

Alexander had been 2:1, or anything near that, it would have been absurd for him to introduce into the country his own currency based on a ratio of 10:1. But it has to be remembered that this currency was a forced one, with values fixed arbitrarily for the coins throughout the empire, and making no allowance for fluctuations in the market value of metal or local variations in exchange: it was modelled on the Athenian coinage, which had probably been similarly forced for Attica from the time of Solon, and in the middle of the fifth century for the whole Athenian empire. So long as the kingdom of Alexander held together, it would not matter much if in one province the silver circulated at a value below its market-price as metal: some amount of coin might be melted down, and some merchants might make considerable profits; probably the price of silver would drop temporarily, as the amount available would be enormously increased by the capture of the Persian reserves of coin, and the risks of transport would be diminished. But this state of things would continue only while Egypt was under the same rule as silver-producing countries: as soon as it became a separate kingdom the situation was materially altered.

Under the Ptolemies the conditions of Egypt in regard to obtaining supplies of silver were not unlike what they had been under the Ramessides: it had to come from abroad, subject to the usual risks of merchandise, and involved an outlay of capital, which would necessarily send up the price in the Egyptian metal-market: and it would not be unreasonable to suppose that the gold value of silver in the third century B.C. might return to something like what it had been in the Twentieth Dynasty. So, if Ptolemy wished to continue the Alexandrine system of currency, he would be faced with the problem of securing his silver at a price which would enable him to strike coins without loss. He could of course buy it abroad, but it would hardly have paid him to buy tetradrachms in Greece, transport them to Egypt, and then recoin them on the same standard: and foreign silver coming in by way of the ordinary course of trade would be secured by the metal merchants, who could easily outbid the government in the market if the bullion value were much above the specie value. The result may be seen in the decree quoted in P. Zeno 59021¹, which is practically an attempt to commandeer all the precious metal that entered Egypt: the king ordered that all external money should be exchanged for Egyptian currency, or, in other words, sold to the government at its own price, and that manufactured articles should be similarly requisitioned for the purposes of the mint.

It was however evidently impossible for the Egyptian government to secure silver at a price which would enable it to continue the silver coinage on the standard set by Alexander: and the first expedient tried was the reduction of the standard: within a few years the silver tetradrachm dropped from an average weight of slightly over 17 grammes to one of about 15·7, and then again to one of about 14·2². But even this did not keep the silver in circulation, and little more than half a century after the death of Alexander, in 270 B.C., Ptolemy II gave up the attempt to force an exotic currency on the country as the standard of values, and, while he still struck gold and silver for foreign trade and for his possessions outside Egypt, he issued a series of copper coins which were clearly intended to have a real value, not simply to serve as tokens like other copper coinages of Greece and the Levant. As the natural consequence of this, the copper drachma was recognized as a standard in Egypt, and, after the middle of the third century B.C. down

¹ First published by C. C. Edgar in *Ann. Serv.*, XVIII, 167: there is an important commentary on it by Schubart and Regling in *Z. f. N.*, XXXIII, 74.

² For details, see Segrè's article quoted above.

to the Roman conquest, internal business was habitually transacted on the basis of a reckoning in copper drachmas¹.

There are numerous instances of equations between silver and copper stated in papyri of this period, and the ratio has perplexed metrologists who have sought to explain it on the normal Greek basis: it ranged generally between 500:1 and 400:1, usually nearer the higher than the lower figure: and this would of course be impossible as a ratio of metal values in Greece itself. But, if the ratio of silver to gold in Egypt were anything like what it had been in the Twentieth Dynasty, then the ratio of copper to gold—perhaps about 1000:1—would not be so startling: it is simply the high value of silver in Egypt which makes its position in the scale seem abnormal. It must be remembered that the Ptolemies controlled supplies of gold and of copper, and could stabilize the prices of both: it was only in regard to silver that they were helpless.

The second reduction of the weight of the silver tetradrachm under Ptolemy I had brought it down to what is known as the "Phoenician" standard, which suited the requirements of the Asiatic parts of the Ptolemaic empire: and silver continued to be coined on this basis, with a gold currency related to it on the Asiatic ratio of about 13:1. A very considerable proportion of the third century Ptolemaic silver was issued from the Phoenician mints, mainly from Tyre and Sidon, though the mint-marks of Joppa and Ptolemais-Ake are also found: and, so long as Phoenicia remained in the hands of the Ptolemies, the purity of the coinage was fairly well maintained. The Phoenician metal-market would be independent of the Egyptian, and the Phoenician merchants would expect a sound currency on the standards to which they were accustomed: this would secure that the tetradrachms of Tyre and Sidon were kept up to the mark, and react on the mint of Alexandria as regards the coinage of silver. It is evident that the Phoenician and Egyptian issues circulated side by side, as they are constantly found mixed up together in hoards, both in Egypt and outside.

In the second century B.C., however, when Phoenicia had passed from the Ptolemies to the Seleucids, a depreciation in the Egyptian silver began: the tetradrachm was struck at about the same weight, but with an increasing quantity of alloy, till it consisted of only about 25% silver. So far as the Egyptian market was concerned, there was an advantage in this reduction in fineness, as it brought the metal content of the coin to something nearer its nominal value, and so helped to secure its circulation: and the rather scanty evidence of Egyptian finds suggests that the debased tetradrachms of this period did in fact circulate more freely in the country than the good silver of the earlier kings. The only district outside Africa which was still under Ptolemaic rule was Cyprus, and that island was not of sufficient importance commercially to maintain the standard of the tetradrachm: the three Cypriote mints of Paphos, Salamis, and Kition followed the Egyptian lead in the debasement of their silver. Beyond Egyptian territory the Ptolemaic silver was naturally exchanged at its metal value: in the Greek markets the tetradrachm was generally tarified at one-fourth of its nominal value as a drachma, at Rome as a denarius: but there would be little coin exported from Egypt in the first century B.C. Ptolemaic gold and silver of the third century are found not infrequently in various parts of the Aegean area, later issues hardly ever occur.

It is a curious fact that all the late Ptolemaic silver bears the marks of the Cypriote mints, at first of the three just named, afterwards of Paphos only. It would be understandable that silver should only be struck in Cyprus in the latter part of the second century and beginning of the first, as this was the only part of the empire which trans-

¹ See *The Copper Coinage of the Ptolemies*, *Liverpool Annals*, I, 30.

acted its business on a silver standard: but the ΠΑ of Paphos continues to appear on the tetradrachms after the island had ceased to belong to the Ptolemies. It is hardly likely, though possible, that the Roman governors of Cyprus would take on a contract for striking coins for the kings of Egypt: and it seems more probable that towards the end of the second century the mint of Paphos had monopolized the coinage of silver to such an extent that its mark was regarded as an essential part of the type of the tetradrachm, and was slavishly copied when the coins were actually struck at Alexandria¹.

The final state of the Ptolemaic currency is fairly clear. Gold had probably ceased to be struck by about 100 B.C.: there are no gold pieces which can be dated with certainty to the first century. There was an abundant supply of base silver tetradrachms, with a silver content of about 25%, which served as a nominal unit of reckoning for the silver standard and for purposes of foreign exchange. For internal trade the real circulating medium was copper: and under Cleopatra the two chief denominations of this metal were marked as of the value of eighty and forty drachmas respectively. These values were probably chosen for convenience of relation to the silver standard: though the ratio of exchange between silver and copper, as already stated, fluctuated, a tabulation of the figures shows that the point of maximum frequency is near enough to 480:1 to suggest that this might have been the official ratio, which would be affected by the market quotations and liable to go up or down in the transaction of actual business like modern exchange rates. If this was the official ratio, then pieces of eighty and forty copper drachmas would be reckoned as obols and half-obols on the silver standard.

This was the scheme of currency found in Egypt and taken over by the Roman conquerors: and, as it was the declared policy of Augustus to keep Egypt apart from the rest of the empire, it persisted, though gradually decaying, until the monetary reform of Diocletian was applied to Egypt equally with the other provinces.

NOTE: That a ratio of 2:1 between gold and silver was not impossible in a country in touch with Mediterranean trade is shown by the fact that such a ratio actually existed in Southern Arabia in the time of Augustus (Strabo, xvi, 4, 19).

The argument of this paper has been criticized on the ground that, if silver had been so valuable in Egypt, merchants would have imported such quantities of it as to send the price down. This seems to assume either an altruism or a stupidity in the merchants which would be hard to credit. Moreover, Mr. Lucas has shown (*Journal*, xiv, 313-9) that there may have been some local production of silver in Egypt, though only in small quantities and under conditions which would make it comparatively expensive: if this were the case, it would be quite natural for the Egyptian government to control imports of foreign silver so as to keep up the price.

¹ With regard to the distribution of these coins between Alexandria and Paphos, see E. T. Newell on the Kenah hoard in *Two Recent Egyptian Hoards* (New York, 1927).

A PORTRAIT-STATUETTE OF SESOSTRIS III

By H. R. HALL

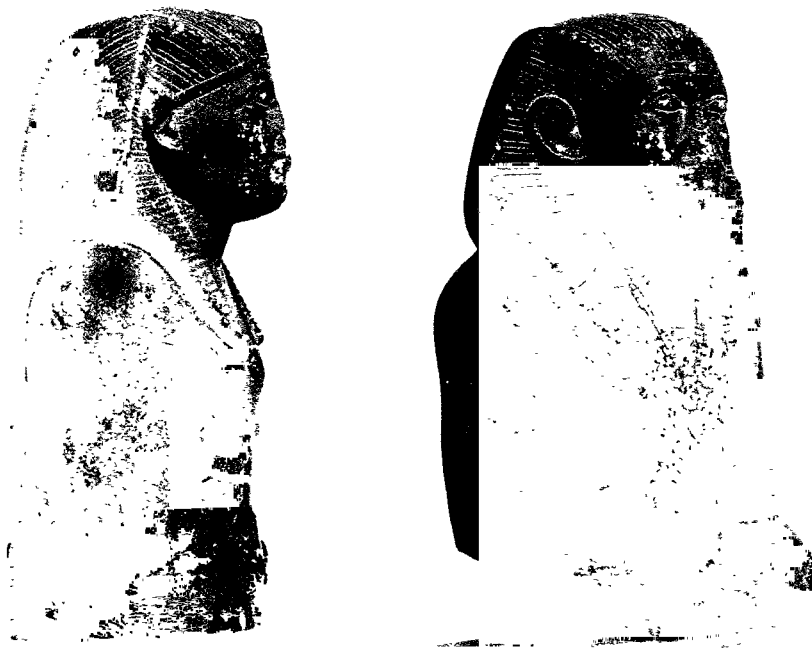
With Plate xxx.

No. 36298 of the British Museum (Pl. xxx) is a small statuette of grey slate representing king Sesostris III. It is not inscribed, but the portrait is evident, though battered about the nose and mouth. The eyes, a characteristic feature of the king's face, are well preserved. (Cf. the series in Evers, *Staat aus dem Stein*, Pls. 78 ff.) It is 8 in. (20.2 cm.) tall. The king wears the usual *nemes* headdress and the necklace with the peculiar pendent double amulet with a pin through it, which he is always represented in his statues as wearing (cf. Brit. Mus., Nos. 684-6; Naville and Hall, *Deir el-bahari, XIth Dyn. Temple*, II, Pl. ii; III, Pls. i, xxi): it was usually worn by the Twelfth Dynasty kings. The beads of the necklace are well shown as a succession of longs and shorts. The original long beads will have been about 2 in. (5 cm.) in length. The tail of his uraeus is disposed as shown in the accompanying cut: in an angular style characteristic of the reign.



The statuette was seated, as is shown by the bending of the left arm: the other is broken away above the elbow.

This is a good example of smaller official portraits of this king, and it is to be regretted that the features have suffered damage.



Portrait Statue of Sesostri III, B M. No. 36,298. *Scale c. $\frac{1}{2}$.*



1



2



3

1. Incantation papyrus in the Ashmolean Museum, Oxford. *Scale c. $\frac{1}{8}$.*
2 and 3 Mummy-head in the Museum of the Royal College of Surgeons.

AN INCANTATION IN THE ASHMOLEAN MUSEUM

BY ARTHUR S. HUNT

With Plate xxxi, fig. 1.

In Plate xx, fig. 8, of Sir Flinders Petrie's *Hawara, Biahmu and Arsinoe*, 1889, a drawing on a reduced scale is given of an object described as a "mud figure bound on a papyrus: a charm?"; a more exact illustration is afforded by the photographic reproduction which accompanies the present article (Plate xxxi, fig. 1). Nothing is said about the circumstances of the discovery of the hypothetical charm: presumably it was among the casual products of the surface soil of the Hawâra cemetery, like the miscellaneous papyri found during the same season's work (cf. *op. cit.*, 8 and 28), with one of which, as will be seen later, it has a close affinity. Having been presented to the Ashmolean Museum, Oxford, it lay undisturbed in its case until one day last year, when with the approval of the Keeper of the Museum I removed the fibres of papyrus by which the clay figure was attached and flattened out the tightly rolled sheet. This measures 17·8 × 9·5 cm. and contains the appended text, written in an ill-formed cursive hand which may be of the second or third century.

Ὡς ὁ Τυφῶν ἀντίδικ-
 {κ}[ός] ἐ(σ)τιν τοῦ ἡλείου, οὕτο-
 ς καῦσον καρδίαν καὶ ψυ-
 χὴν αὐτοῦ Ἀμ(μ)ωνείου οὗ
 5 ἔτεκεν Ἑλέλι καὶ εἰδία μή-
 τρα, ἀδωνα(ι) ἀβρασασξ πι-
 ν[ο]υτι καὶ σαβαως, καῦσο-
 ν ψυχὴν καὶ καρδίαν
 αὐτοῦ Ἀμωνείου οὗ ἔτε-
 10 κεν Ἑλέν(η) ἐπ' αὐτὸν Σερα-
 πιακὼν ὃν ἔτεκεν θρεπτ-
 ή, ἄρτ[ι ἄ]ρτι, ταιχὺ ταχύ, τῇ α-
 [ύ]τῃ ὄρα καὶ τῇ αὐτῇ ἡ-
 μέρα, ἐξουτῆς συνκατά-
 15 μείξον τὰς ψυχὰς ἀν-

φοτέρων καὶ πύησον
 αὐτὸν τὸν Ἀμ(μ)ωνειῶν
 ὦν ἔτεκεν Ἑλένη αὐ-
 τὸν Σεραπιακὸν ὃν ἔτ-
 20 εκεν θρεπτὴ πᾶσαν ὄρ-
 αν καὶ πᾶσαν ἡμέραν καὶ
 πᾶσαν νύκτα, διω ἀδω-
 ναι, οἴψειστε θεον, οὗ
 ἐ(σ)τιν τῶνομαι τὸ ἀλει-
 25 θινὸν διοω καὶ ἀδωναί.

On the verso

ωναι
 Σερα
 πιακού.

X

2. 1. οὕτως. 5. 1. Ἑλένη. 10. 1. Σεραπιακόν. 12. First *αρτ[ι]* added above the line. 1. ταχύ.
 Possibly *τακ* was altered to *ταχ*. 13. 1. ὦρα: similarly in l. 20. 14. 1. ἐξαντῆς. 15. 1. ἀμφοτέρων.
 16. 1. ποιήσον. 17-18. 1. Ἀμμώνιον ὄν. 23. 1. ὑψιστε θεῶν. 24. 1. τὸ ὄνομα τὸ ἀληθινόν. 28. *ν* of
σεραπιακου above the line.

Of this I take the meaning to be as follows:

"As Typhon is the adversary of the sun, even so inflame the heart and soul of Ammonius whom Helene bare, even her own womb, adonai abrasax pin[o]uti and sabaoth,

in flame the soul and heart of Ammonius whom Helene bare towards Serapiacus whom a slave-woman bare, now now, quickly quickly, in this very hour, on this very day, forthwith commingle the souls of them both and cause Ammonius himself whom Helene bare [to love?] Serapiacus whom a slave-woman bare, every hour and every day and every night, dio adonai, most exalted of gods, whose true name is dioo and adonai."

A text very similar to this, but broken at the bottom, was published by Mr. J. G. Milne among other papyri from Hawâra in *Archiv für Papyrusforschung*, v, 393. I reprint it here for comparison. Like the Ashmolean papyrus, it is in a rude hand, which Milne suggested might belong to the second century. Perhaps the two spells were cast by the same writer.

Ἐξορκίζ[ω] σε, Εὐάγγελε,
κατὰ τοῦ Ἀνούβιδος καὶ
τοῦ Ἑρμοῦ καὶ (τ)ῶν λοι(πῶν) πάν-
των κάτω ἄξαι καὶ καταδ-
5 ἦσαι Σαραπιάδα ἦν ἔτε-
κεν Ἐλένη ἐπ' αὐτὴν Ἑρα-
εῖδαν ἦν ἔτεκεν Θερμο-
υθάριν ἄρτι ἄρτι, ταχὺ τα-
χύ, ἐξ ψυχῆς καὶ καρδίας,
10 ἄγε αὐτὴν τὴν Σαραπιά-

δ[α] ἦν ἔτεκεν εἰδία μήτρ-
α μαεὶ οτε ἐλβωσατοκ
αλαουβητωφειο[
.αην ἄξον καὶ κα[τάδησον?
15 ουν ψυχῇ [
θ ἦν ἔτεκεν [. . . . ἐπ' αὐ-
τὴν Ἑραεῖ[δαν ἦν ἔτεκε-
ν Θερμουθάριν. . .
[. . .] αὐτῆς .[
.

Upon this the following explanatory notes were contributed by the late R. Wünsch, *op. cit.*, 397: "Z. 6 ἐπ αὐτὴν muss, wenn es richtig gelesen ist, von κάτω ἄξαι abhängen. Dann ist Herais schon in der Unterwelt. ... Demnach wäre jene Herais bereits gestorben, und zwar, wie man glaubte, durch ein Fluchzauber. Z. 11 ... Der Schreiber des Papyrus ist zweifelhaft geworden, ob er Z. 7 den wirklichen Namen der Mutter genannt hat und setzt deshalb die allgemeine, sicher zutreffende Formel. ... Z. 14 f. ... Mit ἄξον beginnt ein neuer Fluch, wenn Z. 16 θ richtig ist, gegen eine neue Person."

While hesitating to differ from a specialist in such matters, I cannot but think not only that Wünsch was mistaken on certain points of detail, but that he failed to understand the purport of the document. Evidently the two papyri are to be interpreted in the same way, and I suggest that, so far from being curses intended to injure, they are *ἀγωγαί*, incantations the object of which was to provoke love. *ἄγειν* and *καίειν* are recurrent terms in amatory formulae, e.g., P. Brit. Mus., 121, 471-2 (i. 99) ἄγε μοι τὴν δι(να) ... καιομένην τὴν ψυχὴν καὶ τὴν καρδίαν, P. Oslo, *ed.* Eitrem I, 1, 110, ἄξον ἐμοὶ τῷ δι(νι) τὴν δι(να) κεομένην, πυρουμένην ... φιλοῦσαν ἐμέ κ.τ.λ., 346 ἄξον καῦσον τὴν δι(να), 4, 18-21 ἐξορκίζω σε ... ἵνα ἄγῃς (l. -ῃς) μοι Ἑρακλῆν ὃν ἔτεκεν ... ἐπισ πρὸς Ἀλλοῦν ἥς (l. ἦν) ἔτεκεν Ἀλεξάνδρια, ἥδη ἥδη ταχὺ ταχύ. Wünsch was perhaps misled partly by the fact that the two persons named were both female, as in the Ashmolean papyrus they happen both to be male: that, however, is not really material. ἐπ' αὐτὴν in l. 6, on which Wünsch threw suspicion, was quite correct, ἐπί, which reappears in the Ashmolean text, being parallel to πρὸς in P. Oslo, I, 4, 21. κάτω in l. 4 is not to be connected with ἄξαι but with what precedes. The θεοὶ χθόνιοι are similarly invoked in a love-charm in Bibl. Nat. suppl. gr. 574, 296 sqq. (Preisendanz, *Par. Gr. Mag.*, I, 82), Κούρη Περσεφόνη ... καὶ Ἀδώνιδι ... Ἑρμῇ καταχθονίῳ Ὡουθ ... καὶ Ἀνούβιδι ... τῷ τὰς κλεῖδας ἔχοντι τῶν καθ' Αἴδου, θεοῖς καὶ δαίμοσι καταχθονίοις, ... ἄξον καὶ κατάδησον, ἄξον τὴν δεῖνα ... ἔλκε τὴν δεῖνα ... πρὸς ἐμέ τον δεῖνα πάση ὥρᾳ τοῦ αἰῶνος, νυκτὸς καὶ ἡμέρας, κ.τ.λ. Whether or no θ in l. 16 is rightly

read, it is now clear from the Ashmolean papyrus that ἄξον in l. 14 does not, as Wunsch thought, begin a fresh incantation directed against another person, but is merely a repetition. I suggest that ll. 14 sqq. should run ἄξον καὶ κα[τάδησ- ον{ν}] ψυχῇ[ν Σαραπιάδο- ς(?) ἣν ἔτεκεν [Ἐλένη ἐπ' αὐ- τήν Ἡραεῖ[δαν ἣν ἔτεκε- ν Θερμουθά[ριν].... [ἐξ]αυτῆς (cf. P. Ashmol., l. 14). As for ἰδία μήτρα, whether the use of that phrase implies a doubt of the correctness of the mother's name seems very questionable.

A few notes on the Ashmolean text may here be added. For the omission of σ in *εστιν* cf. l. 24. In l. 5 Ελελι, not Ελεν as in l. 10, seems certain. Πιν[ο]ντι (l. 6) is the Egyptian word from which the personal names Πινούτις, Πινουτίων, etc. are derived: its meaning, Professor Griffith informs me, is "the god." In the clause beginning *πήησον* in l. 16 something has apparently dropped out. *διω* in l. 22, spelled three lines later *διοω*, which is coupled with *αδωναι*, is an unusual form, the origin of which is not obvious. Possibly it is connected with *Διός*; it can hardly be a corruption of *Ιαω*. Another obscurity occurs in the first line of the verso, which is shown both in the photograph and in Sir Flinders Petrie's drawing. The second letter may be ν, λ, or γ, but *ωναι* is unintelligible here, and though there are some faint marks on the edge of the papyrus above, they do not look like remains of letters, and it is difficult to believe that ω... was not the first line. Hence neither [αδ-] *ωναι* nor [Αμ(μ)-] *ων...* is acceptable, and for the same reason [ἀγ-] *ωγαι*, which would otherwise be attractive, is also excluded.

The little figure which was tied to the papyrus roll seems to be a rude approximation to human shape and presumably represented Ammonius, the object of the incantation. The use of clay or wax figures is sometimes specified in magical papyri, *e.g.*, P. Brit. Mus., 121, 866 sqq., λαβὼν πηλὸν ἀπὸ τροχοῦ [κε]ραμικοῦ... πλάσων κυρίαν (σελήνην), P. Bibl. Nat. cit., 297 (Preisendanz, *op. cit.*, 82), λαβὼν κηρὸν <ἢ πηλὸν?> ἀπὸ τροχοῦ κεραμικοῦ πλάσων ζῳδια δύο, ἀρρενικὸν καὶ θηλυκόν (these for a love-spell). Whether other actual examples of them have been recovered I do not know.

A MUMMY-HEAD OF UNUSUAL TYPE

By M. L. TILDESLEY

With Plate xxxi, figs. 2 and 3.

In the Museum of the Royal College of Surgeons of England is a mummy-head of unusual type, presented in 1875 by Admiral Sir Erasmus Ommanney. No archaeological history accompanied it, only the unilluminating record that it was obtained by the donor in that same year from an Arab at Medinet Habu, near Thebes.

Wishing to ascertain its period, for entry in the new Catalogue of the Human Osteological Series on which I have been working for some years, I made enquiries of a number of distinguished Egyptologists both here and abroad, submitting to them photographs and a description of the specimen. M. Jean Capart, director of the Fondation Égyptologique Reine Élisabeth in Brussels, based upon an analysis of its features a suggestion as to period (see his letter below), and it was eventually dated by its resemblance to the head of a complete mummy which lay no farther afield than the British Museum. The fact, however, that specimens of this type were not known to those authorities of whom I enquired is sufficient justification for placing a description of this mummy-head on record.

Pl. xxxi, figs. 2 and 3 (facing p. 155) illustrate its appearance full-face and from the right side respectively. The restored features are modelled in a kind of plaster, which is covered by an exactly fitting linen "skin." On this are painted eyebrows, eyes, and beard-line in black pigment; nostrils, mouth, the detail of the ears, the circular spot on the tip of the chin and the corresponding spot in the centre of the forehead, as also small spots in the inner and outer corners of the eyes, are painted in red.

The calvaria of the mummy was doubtless originally covered with a wig or head-dress, now missing, which overlapped and hid the uneven cut edges of the linen. Most of the scalp, however, still remains, and to parts of it there adheres some short wavy hair, dark reddish-brown. This may have been its original colour, though the resinous substance with which the scalp is impregnated would have dyed it dark if it were originally different. The interior of the calvaria is quite clean and empty but for some loose pieces of broken bone. The neck is restored to life-size by swathes of bandages, and their overlap with the piece of linen which formed the integument of the restored face is cemented with plaster. A necklace formed of a triple row of small blue beads also helps to cover the join, and the necklace too is held in place by plaster.

The following is the verdict as to date for which I am indebted to M. Jean Capart:

"J'ai montré au Caire la photographie de la tête de momie et l'impression est la même que la mienne. Il ne s'agit pas là d'une momie du moyen empire, mais bien d'une époque beaucoup plus récente. Je serais tenté de l'attribuer même à l'époque romaine. Le dessin des sourcils, la relation de ceux-ci par rapport aux paupières, le petit dessin à la commissure des lèvres, tout cela me paraît peu égyptien....Je regrette de n'être pas à même de vous donner des indications plus précises et de devoir me borner à une impression."

The mummy by which this head was eventually dated bears the number 6704 in the Egyptian Galleries of the British Museum. Its face is similarly moulded in plaster and covered with linen. The rest of its body is encased with linen bandages and furnishes one of the finest and best preserved examples of mummy-wrapping extant. The whole body, with the exception of the forearms, is bound round with bands of linen laid on so smoothly over the under-wrappings as to give the effect of tights. The wrappings of the arms from the elbow down form an elaborate diagonal pattern (a late Egyptian feature), the lozenges so formed being each outlined with strips of dark brown linen. The body wears a belt and other dark brown strappings. Gilded toe-nails and finger-nails are fixed on in their appropriate positions, but outside the wrappings. This mummy was found at Thebes, and near it an anthropoid coffin, preserved in the British Museum under the number 6703. The latter is of wood covered with plaster, painted dark brown, head, wig and face well modelled and folded arms indicated. On it is an inscription, giving the name "Mut-em-Mennu, a lady of the college of the God Amen-ra, at Thebes."

Although the mummy, when found, was not in the coffin, and although the face on the coffin lacks the beard-mark seen on the mummy, little doubt was entertained that they belonged together. Both are assigned by the British Museum to the Roman period, though the date "100 A.D." which is painted on the exhibit may be more exact than the evidence warrants. The use of the same method of making up the mummy face indicates the same period for our specimen.

Although the technique of moulding the features in plaster and covering them with a linen "skin" is exactly the same in the two specimens, there are, however, certain differences in the painting. The eyebrows of the British Museum mummy show a fringe of hairs only on the upper side; the lines representing the rims of the eyelids are not continued beyond the outer corner of the eye to form part of a triangle as in ours, but prolonged in a horizontal straight line, making the familiar Egyptian eye-shape. The beard-line is thicker than in our mummy-head, and has a zig-zag line along its upper border to indicate hairs. The openings of the nostrils are marked by two spots of red paint as in the other specimen, but the curve of the nostrils is not painted on, nor do the red lips end with ornamental twiddles at the corners. The detail of the ears is indicated in red, just as in our mummy-head.

Many of these differences of detail are such as might be expected in different specimens. Two, however, are more significant: the un-Egyptian appendages to eyes and mouth in the specimen at the Royal College of Surgeons Museum indicate a more marked foreign influence and possibly a somewhat later date. Broadly speaking, however, the period must be the same, namely the Roman domination of Egypt in the early centuries of our era.

THE FINANCIAL TRANSACTIONS OF DIDYMUS

A NEW INTERPRETATION OF BGU 607

By CLINTON W. KEYES

The Didymus whose financial affairs I wish to examine was an Alexandrian Greek resident in the Arsinoite nome and concerned in several financial transactions carried out through banks in Arsinoe; he is styled in full *Δίδυμος Διδύμου τοῦ καὶ Δημητρίου Θέωνος Σωσικόσμιος ὁ καὶ Ἀλθαιεύς*. I shall first present briefly the evidence of the four papyri in which his name appears.

BGU 607.

June 22, 163 A.D.

After the date we find the entry *διὰ τῆς Σαραπίωνος τρ(απέξ)ης πλατίας Γυμνασίου*. Next comes Didymus' name in the nominative, followed by the names, in the dative, of two illiterate camel-keepers of Socnopaei Nesus; these are Pabus, son of Satabus, grandson of Harpagathes, mother Tases, about 40 years old, with a scar on his left forearm, and Pakysis, son of Naraus, grandson of Pakysis, mother Taues, about 37 years old, with a mole between his eyebrows. The papyrus continues as follows:

ἔχιν αὐτοὺς παρὰ τοῦ
[Δι]δύμου ἀπὸ τῶν [ὁ]φι[λομ]έ[ν]ων αὐτοῖς
 15 *φολέτ(ρων) οὗ κατῆξαν πυροῦ ἀπὸ θησαν-*
ρῶν τῆς Ἡρακ(λείδου) μερ[ίδο]ς τῶν ἀπὸ μηνὸ(ς)
Παχῶν τοῦ β(ἔτους) ἕως μηνὸς Ἑπεῖφ τοῦ ἐνεστ(ῶτος)
γ(ἔτους) ἐκ προδόματος, ὁ μὲν Παβοῦς Σατα-
βοῦτος ἐ[π]ὶ λόγου ἀργ(υρίου) (δραχμὰς) διακοσίας ἐνε-
 20 *νήκοντα ἕξ, ὁ δὲ Πεκῦσις Ναραῦτος(ς)*
[ὁ]μοίως ἐπὶ λόγου ἀργ(υρίου) (δραχμὰς) ἑξακοσίας ἐνε-
ᾶς καὶ ἀποδώ(σου)σι τῷ Διδύμῳ ὁπό-
ταν ἀναιρ[ο]ῦνται τὰ ὀφειλόμενα
αὐτοῖς φόλετρα ὑπὸ τῶν εἰωθό-
 25 *των τε[.]σ δημοσίων, ἐὰν*
δ[ὲ] μὴ ἀποδώσι, γείνεσθαι τῷ Διδύ-
μῳ [τῇ]ν πρᾶξιν ἐκ τε αὐτῶν καὶ ἐκ
τῶ[ν] ὑ[π]αρχόντων αὐτοῖς πάντων
καθά[π]ε[ρ] ἐγ(ὸς).

There follows, in a second and third hand, the subscription written for the two illiterate camel-keepers. This includes the words (lines 31–33):

ἔχωμεν παρὰ τοῦ Διδύ-
μ[ου] τ[ᾶς] π[ρο]κ[ι]μένας δραχμ[ᾶ]ς καὶ
ἀ[ποδώσομ]εν καθὼς πρόκ(εῖται).

C. P. Rainer 16.

Aug. 3, 163 A.D.

Through the same bank Didymus lends to Pabus, son of Satabus, grandson of Harpagathes, from Socnopaei Nesus, about 50 years old, with a scar on the right side of his forehead, 148 silver drachmas at 12% interest, to be repaid in Hathyr (Oct.-Nov.), 163.

On account of the general inexactness in statements of age and personal description, particularly in private agreements¹, it seems probable that this Pabus is the same as the one mentioned in BGU 607. This is confirmed by the fact that the amount of this loan, 148 drachmas, is exactly half the amount of the advance made to the Pabus of BGU 607, which makes it very probable that there was some connexion between the two transactions.

C. P. Rainer 14 = Wessely, Stud. 22, 172.

Sept. 11, 166 A.D.

This transaction takes place *διὰ τῆς Σαραπίωνος τραπ(έξης) Ταμείων*. The same Didymus and Pabus, son of Satabus, repay to Ἀγαθὸς Δαίμων ὁ καὶ Σωσικράτης ἑκεκοσμητ(ευκῶς) υἱὸς Μύσθου ἑκεκοσμητ(ευκότος) 360 silver drachmas, the full amount of a loan recorded in a *διαγραφή* of the same bank.

P. Lond. 332 (II, 209 f.).

Sept. 11, 166 A.D.

Through the same bank Didymus, Pabus, son of Satabus, and three others (with Egyptian names) repay to Claudianus *alias* Serenus υἱὸς Μύσθου ἑκεκοσμητ(ευκότος) 1124 silver drachmas, the full amount of a loan recorded in a *διαγραφή* of the same bank.

The two documents last mentioned record payments made on the same day at the same bank. The creditors are brothers, and obviously belong to a family of Greek capitalists².

It seems reasonable to identify the Παβοῦς Σαταβοῦτος of these documents with the one mentioned in BGU 607 and CPR 16. Evidently the Alexandrian Greek Didymus was in some way associated in business with the four Egyptians mentioned in P. Lond. 332, and particularly with Pabus, son of Satabus. It seems to be indicated by this fact and by the moderate amounts of these loans that Didymus is to be rated as a business man of the middle class rather than as a great capitalist³.

Let us now return to the earliest document in which Didymus appears, BGU 607. This seems on its face to be a record of a partial payment of *φόρετρα* to two *καμηλοτρόφοι* for the transportation of government-owned wheat from the granaries of the division of Heraclides (to the docks). But it is hard to see why such a payment, which would naturally be made by state officials⁴, is here made by a man to whom no official title is given; and the documents just examined make it still more evident that Didymus was not a state official. Another difficulty arises from the provisions for the repayment of the *φόρετρα* under certain conditions which are made obscure by the lacuna in line 25.

So far as I can discover, the only attempt to elucidate this document as a whole has been made by F. Oertel⁵. His theory is that the *καμηλοτρόφοι* here mentioned were

¹ J. Hasebroek, *Das Signalement in den Papyirusurkunden*, 83-84; 105. (Papÿrusinstitut Heidelberg, Schrift 3, Berlin and Leipzig, 1921.)

² Cf. Wilcken, *Grundzüge*, 143. Agathodaemon *alias* Sosicrates appears again as a money-lender in P. Flor. I, 24, line 10.

³ Cf. BGU 427, the record of the sale of a camel by an illiterate Alexandrian Greek to an Egyptian of Socnopaei Nesus in 159.

⁴ Cf. P. Lond. 295 (II, 100); Thunell, *Sitologenpapyri*, n. 2.

⁵ *Die Liturgie*, 118, n. 3 and 122, n. 6.

“private” rather than “state” camel-keepers, and that therefore their right to do this work and to receive payment therefor might be called in question by the privileged guild of δημόσιοι καμηλοτρόφοι, who perhaps had a monopoly in their occupation. He would make the mutilated phrase (lines 24–25) read: ὑπὸ τῶν εἰωθότων [κατάγειν ὄνηλ(άτων) or καμηλοτ(ρόφων)] δημοσίων, and, if I understand him rightly, would interpret about as follows (lines 22–25): “which they will also repay in case the wages for transportation owed to them should be collected by the state donkey- (or camel-)keepers who customarily transport (the grain from granaries to docks).” Didymus would then be using this formula to protect himself in case the legal right of these camel-keepers to receive the payment he was then making should ever be contested. Oertel believes Didymus to have been a ναύκληρος whose contract included the land transportation as well as that by water, and who was therefore the employer of these camel-keepers.

This explanation is put forward only tentatively by Oertel, and the chief difficulties in the way of its acceptance appear to be as follows:

(1) In the restoration of line 25 little attention is paid to the letters clearly read by the editor.

(2) The document is dated Payni 28 of the third year, and the transportation work extends from Pachon of the second year to Epiph of the third; therefore by far the greater part of the work had already been done. It hardly seems conceivable that these men would work so long without being certain that they had a legal right to be paid for it, or that an employer would hire and pay them under such conditions.

(3) Such a ναύκληρος would indeed be a *Grossunternehmer*¹, but, as we have seen, there is some indication that Didymus did not belong to that class.

I have been led to a different restoration of line 25 by the evidence of an unpublished papyrus in the Columbia collection (Inv. no. 1, 7, col. 3). This is a receipt given to the δημόσιοι τραπεζίται by a καμηλοτρόφος who writes: ἀπέχ[ω π]αρ’ ὑ[μῶ]ν τ[ὰ]ς ἐπισταλείσας μοι . . . ὡς ἡτησάμην ἐπισταλῆναι [ὑπ]ὲρ φορέτ[ρ]ων πυροῦ οὐ κατῆξα ἀπὸ θ[η]σαυρῶν . . . (δραχμὰς), etc. It appears from this that a man who had done such work requested (ἡτησάμην) payment for it from the state officials, or, as we should say, “sent in his bill.” Therefore I would supply in BGU 607, line 25 [ἀπαι]τε[ῖ]σ[θαι], which fits the space and makes use of the three legible letters, and would interpret lines 22–25 as follows: “which they will also repay at whatever time they receive the wages for transportation owed to them by the state officials to whom bills (for such work) are usually sent” (or, “from whom payment is usually collected”).

This leads to a different interpretation of the document as a whole. Didymus is not hiring and paying these camel-keepers, as they are to be paid by the government upon completion of their work and presentation of their bills. He is lending them the money on the security of the wages due to them. All the expressions which make the document seem to contain a record of actual payment of wages must then be interpreted as emphatic statements of Didymus’ claim upon the φόρετρα when paid². Repayment of the loan is not promised at any definite date, but “at whatever time they receive the φόρετρα³.” The expressions in lines 25–29 and 31–33 are characteristic of loan agreements.

¹ Rostovtzeff, to whom Oertel refers, no longer believes that ναύκληροι took contracts for land transport (see *Social and Economic History*, 624, n. 44), and there is no mention at all of ναύκληροι in the Columbia papyrus cited below, which contains a number of receipts of the type described.

² Cf. P. Oxy. III, 511.

³ Cf. Mitteis, *Chrest.*, 142 = BGU 69, in which a soldier agrees to repay a loan “as soon as he next receives his pay.”

I mentioned above the probability that there was some connexion between the transactions of BGU 607 and CPR 16. My conjectural reconstruction of the course of events is as follows. On June 22, 163 two camel-keepers had been transporting grain for the government for over a year without being paid, and were in need of ready money. Didymus, probably a business associate, lent them part of the money due without interest, until the government should pay them. On Aug. 3, 163, a short time after the work was finished, the camel-keepers had received their compensation from the government, but one of them, Pabus, found it convenient to repay only half the loan, desiring to retain the balance for about three months. Therefore we now find him signing a note, at the regular rate of interest, for exactly half the amount of the original loan¹. Three years later we find Didymus still associated with the same Pabus, since he is now repaying, in partnership with him and three others, sums of moderate size borrowed from Greek capitalists.

¹ There is evidence that loans without interest were sometimes made with the provision that, in case they were not repaid when due, interest should accrue from the due date. See P. Rylands II, 176; P. Oxy. II, 269. Therefore it was evidently quite the normal thing that Pabus should at this point sign an interest-bearing note.

THREE INSCRIBED STATUES IN BOSTON

BY DOWS DUNHAM

With Plates xxxii-xxxiv.

The Museum of Fine Arts in Boston has recently acquired a small group of Egyptian sculptures, of which three pieces deserve notice for the interest of their inscriptions. The group was obtained from a gentleman living in Lowell, Massachusetts, who reports that the objects came into the possession of his family in the following manner. During the American Civil War (1861-65) they were brought into the port of New Orleans by a ship coming from Egypt, were seized by the customs authorities, and subsequently sold to the grandfather of the recent owner, who brought them to Massachusetts and has had them in his possession ever since. The three pieces under notice are registered in the Museum's collection under the numbers 29.728, 29.731, and 29.732.

29.728. Statuette of red granite (Pl. xxxii, figs. 1-3). Height 0.460 m. Standing figure of a man with arms at sides. Clothed in a long skirt, reaching from below the breast to the ankles, and supported by a cord passing around the neck. The head, feet, and base are missing. A heavy rectangular support, of which the upper and lower extremities are lacking, extends the length of the back. Apart from minor bruises the stone is in good condition.

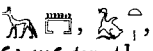
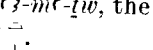

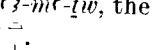

Inscriptions: On right shoulder cartouche *Dḥwti-mś*.

On right breast cartouche *Mn-ḥpr-Rc*.

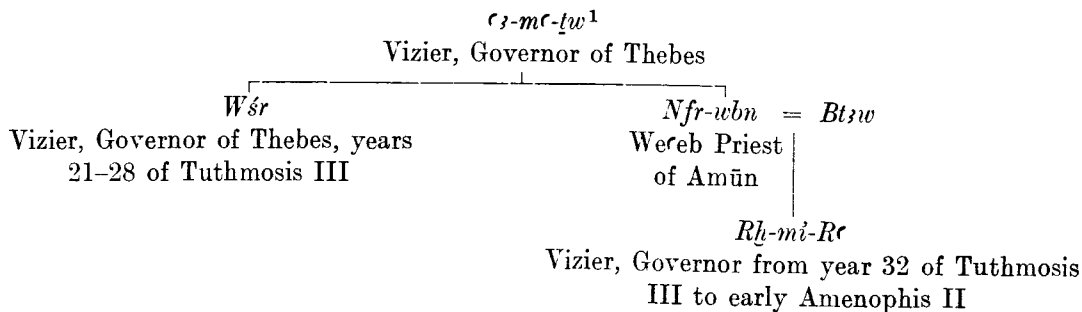
Down front of skirt, complete inscription (Pl. xxxii, fig. 1).

Down back support, incomplete at each end (Pl. xxxii, fig. 3).

This statuette presents two points of special interest.

1st. The natural assumption is that the figure represents the *Nfr-wbn* whom Newberry gives in his *Life of Rekhmara* as the father of that Vizier. This assumption is supported by the presence of the cartouches of Tuthmosis III, as also by the dress, which is the same as that worn by Rekhmerē in the tomb scenes. I can find no record of a *Nfr-wbn* with the title of Vizier, but it is significant that he is here , , and , all of which titles were borne also by Rekhmerē. *Ḥz-mḥ-ṯw*, the father of the *Nfr-wbn* of Rekhmerē's tomb, also bore the titles  and .

Newberry gives the relationships involved as follows:



¹ See also Davies-Gardiner, *The Tomb of Amenemhēt*, 32.



3

2

1

Statue No. 29.728 in the Museum of Fine Arts, Boston. *Scale 1/4 in.*

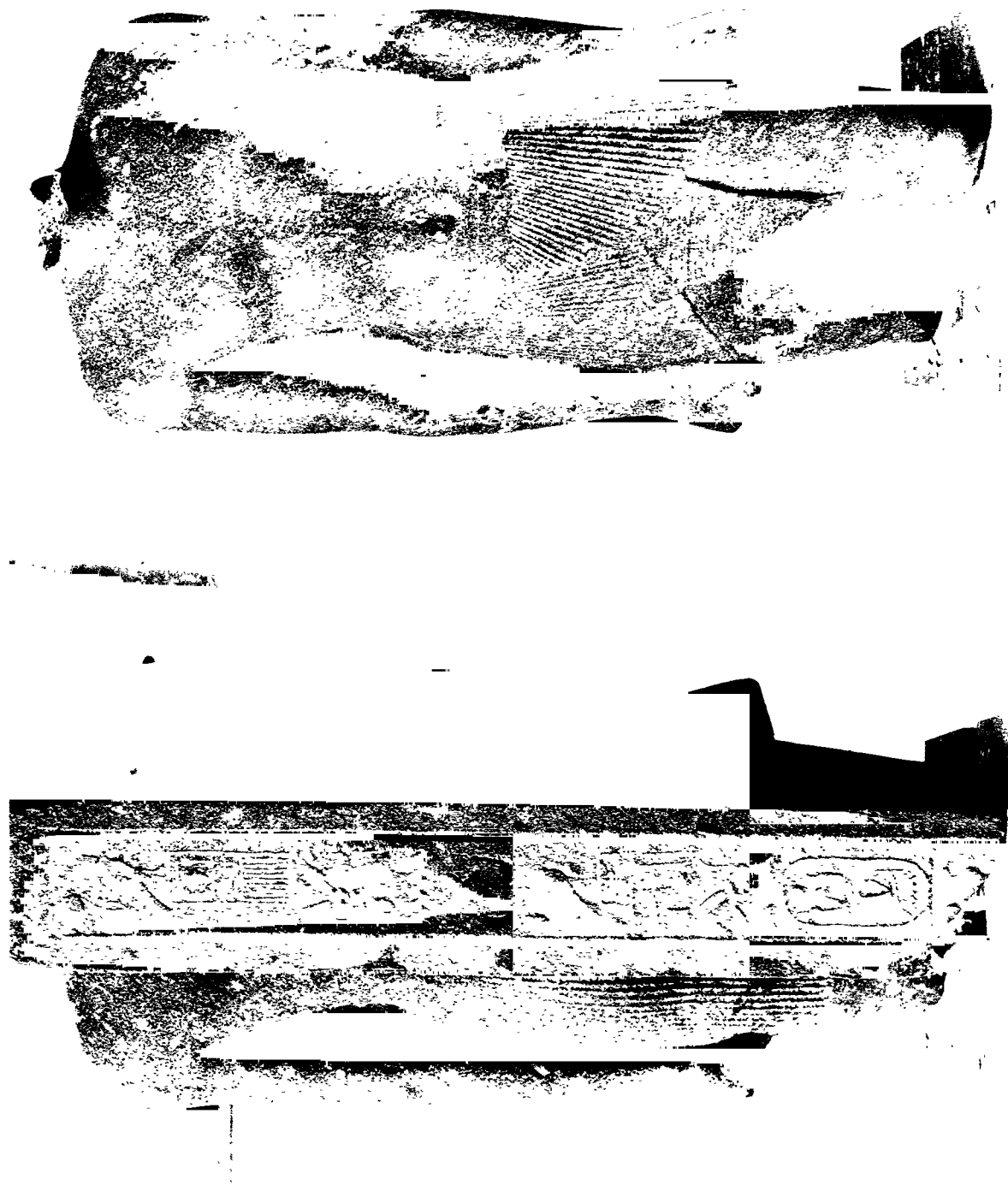


1



2

Statuette No. 29731 in the Museum of Fine Arts, Boston. *Scale of fig. 1, c. $\frac{1}{10}$.*



Statue No. 29.732 in the Museum of Fine Arts, Boston. *Scale c. 1/2.*

FOUR GEOMETRICAL PROBLEMS FROM THE MOSCOW MATHEMATICAL PAPYRUS

BY BATTISCOMBE GUNN AND T. ERIC PEET

With Plates xxxv-xxxvi.

Six years ago one of the writers, then engaged on the publication of the Rhind Mathematical Papyrus, was allowed by the Russian authorities to have photographs of the somewhat similar but rather earlier papyrus formerly in the possession of Professor W. Golenishchef, and now preserved in the Moscow Museum. At a later date M. Romanof, Director of the Moscow Museum, very kindly supplied the other writer with a similar set of photographs, at the instance of M. V. Vikentief, of the Egyptian University. As the papyrus in question was to be published by Professor Struvé it was understood that its contents, although available for study and comparison, were not to be made public by others, and this condition has been strictly observed. One problem, however, involving the correct determination of the volume of a truncated pyramid, had already been published by Turaief in *Ancient Egypt*, 1917, 100-2, and was therefore exempt from the embargo. In 1925, moreover, Zinzerling published in the *Bulletin of the Russian Academy of Sciences* an article¹ based on a paper read to the Academy several years previously by Turaief; it contained an exposition of the principles of Egyptian geometry, together with transcriptions of four new problems from the Moscow papyrus. The transcriptions, stated to be by Turaief, are both inaccurate and incomplete, and it is probable that their author, had he lived, would never have given them to the world in their present form. Three of the new problems are geometrical; the fourth is concerned with measures of capacity.

This full publication of the four new problems clearly frees these also from the embargo, and in view of the recent revival of interest in Egyptian mathematics² the present writers feel justified in attempting to give a fresh transcription and discussion of the three new geometrical problems as well as of that long since published by Turaief.

The Moscow Papyrus is a long narrow document, written, on one side only, in small compact columns or pages of at most eight lines of horizontal writing³. A single problem may occupy as many as six columns. The whole papyrus contains, either entire or in

¹ Д. П. Цинзерлинг, *Геометрия у древних египтян*, in *Известия Российской Акад. Наук.* 1925, ser. 6, XIX, 541-68.

² See for example Otto Neugebauer's admirable *Die Grundlagen der ägyptischen Bruchrechnung* (Berlin, 1926); O. Gillain, *La Science égyptienne: L'Arithmétique au Moyen Empire* (Brussels, 1927); various recent articles cited in the *Bibliographie* of the latter work; S. R. K. Glanville, *The Mathematical Leather Roll in the British Museum*, in *Journal*, XIII, 232 foll.; Professor Archibald's immense bibliography of the Rhind Papyrus, now, we believe, in the Press; and Dr. Chace's forthcoming volume on the same papyrus.

³ *Format* and handwriting point to the late Middle Kingdom. It will be noticed as an unusual feature that each new line usually begins a new sentence.

part, 38 columns and 21 problems. The four problems with which we are concerned are, according to our numbering, as follows:

No. 6 (Column 8).

No. 14 (Columns 27-29).

No. 7 (Column 9).

No. 17 (Columns 33-34).

The other problem treated in Zinzerling's article is No. 21 (Column 38). The last three lines of the transcription of this problem given by Zinzerling are not to be found in our photographs, and it is difficult to see where they can stand. Column 38 is the last of the book, judging by the sets of photographs supplied to us and to others, and Professor Golenishchev, to whom the papyrus formerly belonged, assures us that there is no writing on the verso. The published transcription of these lines is manifestly very inaccurate, and in the absence of any means of controlling the text we prefer not to attempt a treatment of the problem, which, moreover, has nothing to do with geometry.

Problem No. 6.

(Transcription, Pl. xxxv.)

Example¹ of calculating² an enclosure.

If you are told: An enclosure of a set and 2 arurae, the breadth having $\frac{3}{4}$ of the length:

You are to treat $\frac{3}{4}$ so as to find 1; the result is $1\frac{1}{3}$. [You are to take] this [12] which is in a set and 2 arurae $1\frac{1}{3}$ <times>; result 16. You are to calculate its square root; result 4—for the length, and the breadth has $\frac{3}{4}$ of it, namely 3.

The correct procedure:

$$\begin{array}{r} 4 \\ \boxed{12} \end{array} 3 \quad \begin{array}{r} \setminus 1 \\ \setminus 2 \end{array} \begin{array}{r} 4 \\ 8 \end{array}$$

NOTES ON THE TEXT.

Line 1. The word for the subject of the calculation is damaged both here and in line 2. The sign preceding \square (the latter clear in both cases) will be 𐀓 , the word being shown by the following 𐀓 in line 2 to be feminine. 𐀓 suits the damaged signs perfectly in both places—judging by the photograph—and seems to be the only word that does so. The word $\text{𐀓}\square$ is used of many kinds of rectangular enclosed spaces, *cf.* not only the meanings “room,” “house,” but also *et nt ht*, “enclosure of trees,” *i.e.*, “orchard³.”

Lines 2, 4. $\text{𐀓}\text{𐀓}$. On the reading and meaning see the commentary.

Line 3. Before 𐀓 is a small gap, but it is unlikely that any signs are lost. For *hpr-hr m X*, *cf. Berlin Pap.* 6619 and the references *Journal*, XII, 125.

Line 4. The scribe has certainly omitted 𐀓 before 𐀓 .

Lines 4, 5. The fragment now mounted at the beginnings of these lines is undoubtedly out of place. The restorations in the transcription, Pl. xxxv, suit the gaps and the sense.

Line 6. The hieratic sign for “8” at the end is quite abnormal (as are a number of this scribe’s numerals), but the reading is certain.

¹ To avoid confusion the numbers of the lines, given in the plates of transcriptions and referred to in the Notes on the Text, are omitted in the translations.

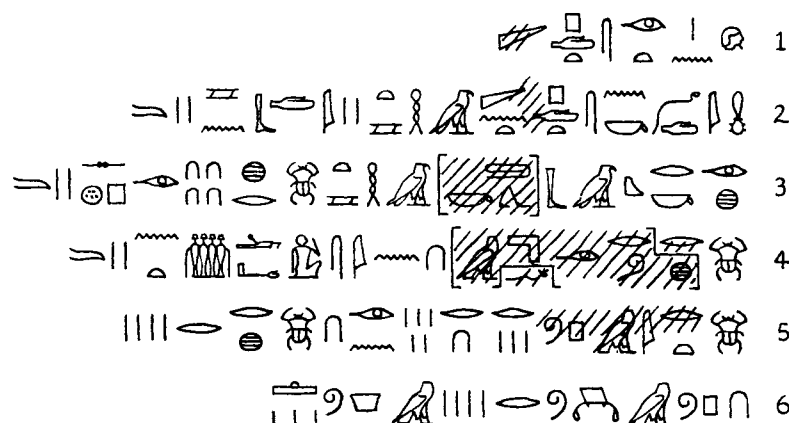
² Literally, “making” (*hrt*). This verb is used of a number of various operations in the mathematical texts; in these four problems we find it meaning to “work out” the volume or area of a figure; to “take” a number so many times (multiplication) or “take” a fraction of a number; to “treat” a number so as to find another (division); to “extract” a square root.

³ *Cf. Brugsch, Worterb., Suppl.*, 185-86.

PROBLEM № 6.



PROBLEM № 7.



PROBLEM № 17.



TO NEXT PLATE.

COMMENTARY.

The purely mathematical content of the problem is simple and obvious. We are given a rectangular enclosure whose area is 12 square units and are told that its breadth is $\frac{3}{4}$ (the Egyptian has here, as always, $\frac{1}{2} \frac{1}{4}$) of its length; find both.

The modern method of dealing with this problem is as follows:

Let x be the length in linear units; then $\frac{3}{4}x$ will be the breadth, and the area will be $\frac{3}{4}x^2$ square units. Equating this with the given area of 12 we get $\frac{3}{4}x^2 = 12$, or $x = 4$.

If the problem were set as an arithmetical exercise we should solve it in just the same way, while employing a more complicated phraseology to avoid the explicit introduction of the symbol x .

A glance at the Egyptian method will show that the arithmetical operations there performed are the same as our own. The $\frac{3}{4}$ (written $\frac{1}{2} \frac{1}{4}$) is divided into unity¹ (*i.e.*, inverted), giving $1\frac{1}{3}$, and 12 is multiplied by this, giving 16. The square root of the latter is then taken and stated, correctly, to be the length required. Finally the breadth, 3, is obtained as $\frac{3}{4}$ of this. This close correspondence with the modern method need cause no surprise, for after all there is but one way of obtaining the correct answer from the data given.

At the same time it is obvious that the mental process involved in the Egyptian method is not the same as that involved in ours. This is hardly the place in which to discuss the psychological meaning of the use of the unknown x in mathematics, but it is at least clear that this, whether used explicitly in an algebraical solution or implicitly in some purely "arithmetical" one, gives to the modern method an abstract character entirely foreign to Egyptian mathematics. Once we have named our two sides x and $\frac{3}{4}x$ and multiplied them together to get the area—a concrete enough process this—we are in the realm of pure and abstract mathematics until we have found the value of x , namely 4, when we look back to the beginning to see what x was and so formulate our answer.

The Egyptian method, if we understand it rightly, is much more concrete than this. As usual, the solution shown gives only the operations to be performed. In the following paragraph we attempt to reconstruct the reasoned Egyptian solution of this problem, those parts which are found in the text being printed in italic:

"A rectangle having breadth $\frac{3}{4}$ of the length will have $\frac{3}{4}$ the area of a square on the length, since, one side of any rectangle being constant, the area varies directly as the length of the adjacent sides. The length of our enclosure will therefore be equal to the side of a square whose area shall have the same proportion to the area of the enclosure that the length of the latter has to its breadth. The breadth being $\frac{3}{4}$ of the length, *you must divide $\frac{3}{4}$ into 1 to find the proportion of length to breadth; the result is $1\frac{1}{3}$. The area of our enclosure, namely 12, is therefore to be multiplied by $1\frac{1}{3}$; result 16, which is the area of the square sought. To find the length of a side of this square, you are to*

¹ The Egyptian expression is here "treat $\frac{1}{2} \frac{1}{4}$ so as to find 1." To treat x so as to find y means that x is to be treated by multiplying by whole numbers or fractions, or both, until one or more of the products render y . See Peet, *Rhind Mathematical Papyrus*, 13-14. In this case the working would be:

$$\begin{array}{l} \searrow 1 \quad \frac{1}{2} \quad \frac{1}{4} \\ \quad \frac{2}{3} \quad \frac{1}{3} \quad \frac{1}{6} \text{ (on this stage see Peet, } op. cit., 20). \\ \searrow \frac{1}{3} \quad \frac{1}{6} \quad \frac{1}{12} \end{array}$$

Since $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{6}$ and $\frac{1}{12}$ together render 1, the answer is 1 and $\frac{1}{3}$. For "treat" the Moscow Papyrus uses only *irt*, not *with tp* or *irt with tp* as mostly in the Rhind Papyrus.

calculate the square root¹ of 16; result 4; this is the length of the enclosure². The breadth of the enclosure is $\frac{2}{3}$ of it (the length), namely 3.”

The figure, with indications of length, breadth and area, and the multiplication of 4 by 3 which accompanies it³, constitute the proof, introduced here, as occasionally elsewhere, by *irt mi hpr*⁴.

So much for the mathematical aspect of the problem. We have now to examine the square and linear measures employed.

The area of the enclosure is given in lines 2 and 4 as 𐎃𐎟𐎠𐎠 . No word written with 𐎃𐎟 is known to us elsewhere as a measure⁵. The hieratic sign rendered by us — is a short horizontal stroke, perhaps meant to be slightly curved in line 2, and straight (but inclining upwards to the right as do all “horizontal” strokes in this script) in line 4⁶; this sign is identical with that used, with numerals under it, as here, in Middle Kingdom papyri and in the Rhind Papyrus for the *setat* (*arura*), a unit of area containing a square *khet*, the *khet* being a linear measure of 100 cubits; this sign is represented by — , — and the like in hieroglyphic. Now the group 𐎃𐎟𐎠𐎠 is clearly an equivalent of the “12” which is to be restored in line 4, for we there read “[you are to take] this [12] which is in 𐎃𐎟𐎠𐎠 , $1\frac{1}{3}$ <times>; result 16.” Whatever doubt may exist otherwise as to the exactitude of our restoration here, there can be none as to the “12,” since the missing number, multiplied by $1\frac{1}{3}$, gives 16. The simplest interpretation of this difficult group would therefore seem to be that the 𐎠𐎠 stands, as elsewhere, for “2 *arurae*,” and is preceded by a word 𐎃𐎟 , otherwise unknown, representing a unit of square measure equal to 10 *arurae*. The principal objection to this view is that it is impossible to understand why the usual term for a unit equal to 10 *arurae*, namely the “thousand-of-land,” is not used here, as it is elsewhere in this very papyrus⁷. That in both cases the word 𐎃𐎟 has no determinative and is not followed by the numeral “1”⁸ could be put down to the ignorance of the scribe; the whole book abounds in errors both of orthography and in the forms of signs.

¹ The word for “square root” is written, here as elsewhere, with the sign 𐎃𐎟 , which represents either a “corner” or more probably a “right-angle.” The underlying idea is perhaps that a right-angle with equal arms, say of 3 in length, 𐎃𐎟 3, is the root of, in the sense of giving the *data* for, a square of 9. It is written 𐎃𐎟 in this MS, 𐎃𐎟𐎠𐎠 in *Berlin Pap.* 6619 and 𐎃𐎟𐎠𐎠 in *Kahun Papyrus*, 8.40. If it is a masculine word it is probably to be read *tm*; cf. Schäfer in *Zeitschr. f. äg. Spr.*, XL, 96, title *hri-(ni)-tm*.

² The reckoner might equally well have elected to find the breadth first, it being the side of a square whose area is $\frac{2}{3}$ (Egyptian $\frac{1}{2} \frac{1}{4}$) of the given enclosure, i.e., 9 square units. The resulting 3 would actually have been found more simply than the length, for the division of unity by $\frac{2}{3}$ would have been avoided. This would, however, have had to be performed in the end in order to obtain the length 4 from the breadth 3.

³ Once (4 is) 4; twice (4 is) 8; (once and twice=3 times, 4 and 8=12).

⁴ See Peet, *Rhind Math. Pap.*, 23, and Gunn in *Journal*, XII, 126.

⁵ A word 𐎃𐎟𐎠𐎠 occurs in Gardiner, *Admonitions*, 14.4 (p. 90), and is tentatively translated by him “ground.” It is certainly not used there as a measure.

⁶ The apparent turn downwards at the right-hand end in line 4 is probably a deception of the photograph, though it is impossible to be quite certain.

⁷ “2 thousands-of-land” is written 𐎃𐎟𐎠𐎠𐎠𐎠 in Problem No. 7 and 𐎃𐎟𐎠𐎠𐎠𐎠 in No. 17 (see below).

⁸ The omission of the numeral seems to be without parallel. The Egyptian for “1 cubit 3 palms,” for instance, is 𐎃𐎟𐎠𐎠𐎠𐎠 , never 𐎃𐎟𐎠𐎠𐎠𐎠 .

If this view, namely that $\overline{\text{𐀓𐀓𐀓}} \overline{\text{𐀓}}$ stands for "10 + 2 *arurae*," i.e., 12 *arurae*, be correct, the linear measures 4 and 3 ascertained as the dimensions of the enclosure will then be multiples of the *khet* (100 cubits, or 52·3 metres), which is equal to a side of the *arura*. Multiples of the *khet* are expressed as mere numerals also in Problems 7, 17 of this book (see below); cf. also the figure in *Rhind Pap.*, No. 48.

That the group $\overline{\text{𐀓𐀓𐀓}} \overline{\text{𐀓}}$ is to be taken as a word $\overline{\text{𐀓𐀓𐀓}}$ followed by the numeral 2 is most unlikely. This word would then have to signify a unit equal to 6 other units of square measure; such a quantity would figure strangely in Egyptian metrology, to which sextuple units are almost entirely unknown¹. Further, the hieratic short horizontal stroke which we have transcribed by $\overline{\text{𐀓}}$ is never found as the determinative of any word meaning a measure, square or otherwise, but only as a word by itself. Finally, the almost invariable custom of all periods of writing weights and measures in Egyptian demands that when the name of the unit is written out in full the numeral which follows it should stand free and not be inserted under the determinative².

There are two other interpretations that might suggest themselves:

1. The short horizontal stroke, with numeral below, is used also to express the "palm" or "hand-breadth" (see Möller, *Hieratische Paläographie*, I, No. 680). But this is only a linear measure, and a measure of area is required here.

2. The same hieratic sign occurs in the word "cubit" (see Möller, *op. cit.*, I, No. 679), but only as an abbreviated form of $\overline{\text{𐀓}}$ in the writing $\overline{\text{𐀓}}$ ³. Hitherto only one pre-demotic mention of the "square cubit" measure has been pointed out⁴, namely in a Wādî Hammâmât inscription of the Middle Kingdom, where $\overline{\text{𐀓}} \overline{\text{𐀓}}$ ⁵ seems to be this. It is thus very improbable that we have here to do with square cubits⁶.

Problem No. 7.

(Transcription, Pl. xxxv.)

Example of calculating a triangle.

If you are told: A triangle of 2 thousands-of-land, the "bank" of $2\frac{1}{2}$:

You are to double the area; result 40 (arurae). Take (it) $2\frac{1}{2}$ times; result [100. Take its square root, namely] 10. Evoke 1 from $2\frac{1}{2}$; what results is $\frac{2}{5}$ ⁷. Apply this to 10; result 4. It is 10 (khet) in length by 4 (khet) in breadth.

¹ The only case known to us is the "little cubit" of 6 palms. Since the *arura* has no subdivision of one-sixth, it is not possible to regard $\overline{\text{𐀓𐀓𐀓}} \overline{\text{𐀓}}$ as an abnormal writing of *šyt*, Coptic $\epsilon\omega\tau$, *arura*.

² This is not, however, a very cogent objection, as there are many groupings of signs which indicate that this MS was copied from one written in vertical lines; with numbers cf. $\overline{\text{𐀓𐀓𐀓}}$, No. 14, lines 2, 10, $\overline{\text{𐀓}}$ (*r* preposition), *ibid.*, line 3. The scribe was demonstrably ignorant.

³ $\overline{\text{𐀓}}$ is probably not a determinative here; $\overline{\text{𐀓}}$ seems to be a compound word, *mḥ-ḥ*, as will be shown elsewhere.

⁴ See Griffith in *Proc. Soc. Bibl. Arch.*, 1892, 419-20.

⁵ Variant $\overline{\text{𐀓}}$.

⁶ No measures equal to 10 square palms or 10 square cubits (such as would suit one of these alternative interpretations) are known.

⁷ Written $\frac{1}{5} \frac{1}{5}$.

NOTES ON THE TEXT.

Lines 1, 2. The determinative of *špdt*, "triangle," here, as in Problem No. 17 and the damaged Problem No. 4, has a shape quite different from that of the sign with which the same word is written in the Rhind Papyrus. In the latter the sign is the symmetrical upright *point* (thorn?)¹, with apex at top, with which all forms and derivatives of *špdt* (primarily meaning "to be sharp") are normally written in hieroglyphic and hieratic. In the Moscow Papyrus, on the other hand, it is a different sign, a scalene *triangle*, with vertical "base" and the apex high up on the right². Thus the word *špdt*, "the pointed," in its special meaning of "triangle" here receives a new determinative, a triangle.

Line 3. The restoration of the determinatives of *ḥꜥb* is based on the writings in Cols. 33 (Problem 17, line 4) and 27 (Problem 14, line 5).

Line 4. The restoration would just fill the gap. The tail of the *ꜥ* is visible. The trace after *ḥꜥ* suits *ḥꜥ* (as in No. 17, line 6) and not *ḥꜥ*. For the imperative *ir* in place of the more normal *ir-ḥꜥ-k ir-k*, for which there is here no room, cf. lines, 3, 5 of this problem. Between *ꜥ* and *ꜥ* there is not room for more than *ḥꜥ*, though one might expect *ḥꜥ* as in the last problem.

Line 5. For *ḥꜥprt im pw* cf. Peet, *op. cit.*, 14, bottom.

COMMENTARY.

Here is a problem in regard to which there can fortunately be no possible doubt. A triangle of given area is such that (to use our terms) its perpendicular height is $2\frac{1}{2}$ times the base³; find both.

The measures employed are well known. The unit of area is the "thousand-of-land," expressed here, as in the Kahun Papyri and often in the Rhind Papyrus, by a simple "1" for each "thousand"; it was so called because it was regarded as made up of a thousand strips each 100 cubits (or one *khet*) long by 1 cubit broad⁴. It was equal to 10 *arurae* (or square *khet*), and thousands-of-land and decuple multiples of the *arurae* were used interchangeably in calculations, as we see from the odd-looking operation: twice 2 are 40⁵. The linear measure, although expressed merely by numerals, is obviously the *khet*.

We have seen in the preceding problem that, given the area of a rectangle and the proportions of its length and breadth, these latter dimensions can be ascertained. The Egyptian knew further that the area of a rectangle is double that of a triangle of the same "length" and "breadth"⁶. Therefore a problem of this kind can be solved by doubling the given area of the triangle and then operating as in the preceding problem.

*You are, then, to double the area; result 40 (arurae)*⁷. We now proceed as in Problem 6, with the difference that there we were told that the breadth was $\frac{3}{4}$ of the length, while here we are told that the length is $2\frac{1}{2}$ times the breadth.

¹ Certainly a concrete object. Influenced by the derivative *špdt*, "triangle," Moller (*op. cit.*, No. 567) and Gardiner doubtfully (*Grammar*, p. 522) have classed the sign with "Geometrical Figures."

² The triangles in the figures annexed to Problems 17 (see below) and 4 have the same form; see also the commentary below. The figures in Pl. xxxvi are facsimiles from the photographs.

³ The Egyptian expression "the bank of $2\frac{1}{2}$ " is dealt with below.

⁴ See Griffith in *Proc. Soc. Bibl. Arch.*, 1892, 415.

⁵ Similarly *Rhind Pap.*, No. 52: "you are to multiply 20 (*arurae*) 5 times; result 10 (thousands-of-land)."

⁶ See Peet, *op. cit.*, 91 foll.; Gunn in *Journal*, xii, 133.

⁷ The italicized words actually occur in the Egyptian text.

A given square will have $2\frac{1}{2}$ times the area of a rectangle whose length is equal to a side of that square and is also $2\frac{1}{2}$ times as long as the adjacent sides. To find, then, the area of a square having its side equal to the length of our rectangle, *you are to take the area of the latter $2\frac{1}{2}$ times; result 100*. Of this 100 (*arurae*) you must now *take the square root, namely 10*, to find the side of the square, equal to the length of our rectangle. You must now find the breadth of the latter; to do this, *evoke 1 from*¹ multiples or fractions of $2\frac{1}{2}$, for the number or numbers which effect this will give us the number which has the same relation to 1 that 1 has to $2\frac{1}{2}$. We find that the fraction $\frac{1}{3}$ of $2\frac{1}{2}$ gives $\frac{2}{3} \cdot \frac{1}{6}$ (i.e., $\frac{5}{6}$), and that $\frac{1}{15}$ of $2\frac{1}{2}$ gives $\frac{1}{6}$; since $\frac{5}{6}$ and $\frac{1}{6}$ are equal to 1, *what results as the answer is $\frac{1}{3} + \frac{1}{15}$, or $\frac{2}{5}$; i.e., $\frac{2}{5}$ is to 1 as 1 is to $2\frac{1}{2}$* . Now, as the length of our rectangle has been found to be 10, *apply* (the fraction $\frac{2}{5}$) *to 10*, that is, take $\frac{2}{5}$ of 10, to find the breadth; *result 4*. But we know that the rectangle thus obtained has the dimensions of the sought triangle; therefore the latter *is 10 (khet) in length by 4 (khet) in breadth*.

We might expect the solution to be followed, as in the preceding problem and in the very similar No. 17, by a figure and some sort of proof; but our scribe has not provided these.

In conclusion we must discuss the way in which our text expresses the relation between those dimensions of a triangle which we call "base" and "height," but which the Egyptian called, among other names, "breadth" and "length," thinking as he did of his plane geometrical figures as lying flat on the ground, and drawing his triangles with the "base" lying vertically, and the "height" horizontally (*cf.* the figure annexed to No. 17).

In the *Rhind Papyrus*, and in *Moscow Pap.*, No. 4, what we call the "height" of a triangle is termed the *emrōyet* (*mrjt*), a word meaning, among other things, a "quay" erected on a river-bank². A glance at Fig. 1 will show how appropriate the term is; the "upper" side *AB* of the triangle *ABC* appears as the sloping river-bank³, and the *emrōyet* is the horizontal quay *BD* above it. Possibly the pictorial conception of the *emrōyet* included not only the flat surface of the quay (*BD*), but also its edge (*DA*), although the *emrōyet* as a dimension is of course *BD* alone and not the combined *BD + DA*.

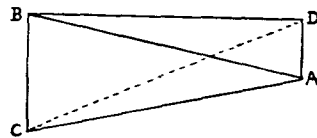


Fig. 1.

Now the word *ideb* ($\text{𓂏} \text{𓂏} \text{𓂏}$, *idb*) used in this problem means a "bank," and seems so close in meaning to *emrōyet* that our first instinct is to regard it here as a mere synonym of this. If this were so, "length," *emrōyet* and *ideb* should all signify the same thing, namely what we moderns call the height of the triangle. A glance at the present problem shows that this is not the case, for *ideb* here means not the "length" but the ratio of "length" to "breadth."

The solution of the difficulty doubtless lies in the fact that despite the general similarity of meaning between the two words *emrōyet* and *ideb* there is a distinct difference. *Emrōyet* is a "quay," that is to say, a horizontal structure at the edge of the water. *Ideb* is simply the bank of a river or canal, and in ninety-nine cases out of a hundred it is sloping. Consequently when these words are taken over into geometry as technical

¹ On this operation see Peet, *op. cit.*, 14; Gunn in *Journal*, XII, 124-5. Note that the operation "evoke *x* from *y*" means in our terms divide *x* by *y*, and the operation "treat *x* to find *y*," discussed p. 169, note 1, above, means divide *y* by *x*.

² See Peet, *op. cit.*, 91 foll.; *Journal*, XII, 133.

³ See, however, p. 174, n. 1.

terms it is natural that *emrōyet* should carry with it the idea of horizontality and *ideb* the idea of slope. Let us now glance at Fig. 1, in which a triangle ABC has been placed in the position in which the Egyptian mathematician apparently pictured his triangles, i.e., with its "breadth" BC vertical. Let AD be drawn parallel to BC and BD perpendicular to AD from B .

Now BD is the *emrōyet*, a horizontal line. Let CD be joined. It is clear from the data of the problem that the *ideb* of $2\frac{1}{2}$ is the ratio $BD:BC$, and it is hard to avoid the conclusion that it is called the *ideb* precisely because it is the measure of the slope of the line DC , the picture in the Egyptian mind being the bank of a river¹. The Egyptian says that the "bank" is $2\frac{1}{2}$ just as we say that a slope is 1 in $2\frac{1}{2}$ or, more technically, that the cotangent of the angle \hat{BCD} is $2\frac{1}{2}$.

Problem No. 17.

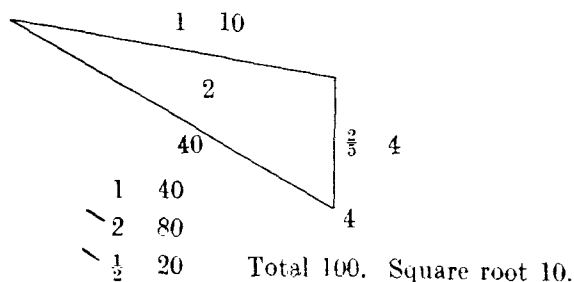
(Transcription, Pls. xxxv, xxxvi.)

Example of calculating a triangle.

If you are told: A triangle of 2 thousand(s-of-land) in its area, and what you put on the length, you must put $\frac{2}{3}$ thereof² on the breadth:

You are to double the 2 thousands; result 40 (arurae). You are to treat $\frac{2}{3}$ so as to find 1; result, $2\frac{1}{2}$ times. You are to take 40 $2\frac{1}{2}$ times; result 100. You are to calculate its square root; result 10. See, it is 10 (khet) in length. You are to take $\frac{2}{3}$ of 10; result 4. See, it is 4 (khet) on the breadth.

You will find (it) right.



NOTES ON THE TEXT.



Lines 1, 2. The writing $\text{𓂏} \text{𓂏} \text{𓂏}$ (elsewhere in this book $\text{𓂏} \text{𓂏} \text{𓂏}$) is interesting as showing the early reduction of p to b in this root, a change already known for the late period from $\text{𓂏} \text{𓂏} \text{𓂏} > \text{co} \text{𓂏} \text{𓂏}$ and $\text{𓂏} \text{𓂏} [> \text{sbdt}] > \Sigma \omega \theta \iota \varsigma$; cf. Sethe in *Zeitschr. f. äg. Spr.*, I, 80.


Lines 2, 4. The hieratic sign for $\text{𓂏} \text{𓂏}$ is quite abnormally formed, but the reading is not in doubt.

Line 3. $\text{𓂏} \text{𓂏}$ is an interesting example of the Prospective Relative Form.

¹ If this view be correct, and if one and the same picture is at the base of the terms *emrōyet* and *ideb*, it seems not improbable that the "bank" on which the "quay" BD is regarded as built is CD rather than BA (see above, p. 173), the vertical edge of the quay being thus BC not DA (Fig. 1). Possibly the technical term *tp-r* for the base of the triangle belongs to the same mind-picture, though we have no examples of its use in connexion with a quay or harbour.

² Here and below, $\frac{2}{3}$ is a translation of the " $\frac{1}{3} \frac{1}{3}$ " of the original.

Line 7.  a bangle of .

Line 8. The abnormal determination of a dimension-word by  occurs elsewhere in this book; cf. p. 178, note 4 below.

Line 9. This sentence frequently follows the solution of a problem in this book (cf. No. 14 below); it occurs also in *Berlin Pap.* 6619 (*Zeitschr. f. äg. Spr.*, xxxviii, Pl. 4), No. 3.

Figure. In the original the triangle is carelessly drawn, with no regard to the proportions, as in the transcription. Three of the numerals to the left (in the original) of the triangle are damaged, but traces remain of all of them, and of the reading there is no doubt.

COMMENTARY.

In its nature and in the measures used¹, this problem is similar to that of No. 7; the only difference is that here we are told that the breadth is $\frac{2}{3}$ of the length, whereas in No. 7 we were told that the length was $2\frac{1}{2}$ times the breadth, statements which amount to the same thing, but which necessitate a variation in the Egyptian method of solution. As in No. 7, the given area of 2 thousands-of-land is doubled, giving 40 *arurae*, the equivalent of 4 thousands-of-land. The problem is now precisely similar to No. 6, and is worked out in the same way.

There follows a figure accompanied by some of the detailed working, not, as in No. 6, by the proof. In the triangle is a 2, indicating its area, 2 thousands-of-land. Beneath this is 40, the area in *arurae* of the rectangle formed by doubling the area of the triangle. Below are the three lines needed to arrive at the product of this 40 and $2\frac{1}{2}$, namely 100, and to the last line is added "square root 10."² Over the triangle stands not simply its length 10 (*khet*) just found, but a 10 immediately preceded by a 1. It may be that the 1 marks the 10 as the object of multiplication in the following computation:

$$\begin{array}{r} 1 \quad 10 \\ \frac{2}{3} \quad 4 \end{array}$$

for to the left (in the original) of the "breadth" is $\frac{2}{3}$ 4, standing for $\frac{2}{3}$ of $10 = 4$; but in such cases 1 as multiplier is always written in hieratic with a dot³ instead of the usual stroke. Under the figures $\frac{2}{3}$ 4 stood the numeral 4; this is the measure in *khet* of the breadth, found by the above computation. As its correct place against the breadth was already filled up by the " $\frac{2}{3}$ 4," the writer placed it as close as possible below.

The way in which the ratio of breadth to length of the triangle is stated in this problem is not without interest. In Problem 7 we saw that the ratio of length to breadth was expressed by the idiom "*ideb* of $2\frac{1}{2}$." For the contrary ratio, however, namely breadth as fraction of length, there appears to be no technical term. This fact would be fully in keeping with the view adopted above, pp. 173, 174, that *ideb* was simply the common word for a sloping bank taken over into geometry in the sense of the ratio of the length of a triangle to its breadth, i.e., $BD : BC$ in Fig. 1. If it be true that the

¹ Note that the same dimensions occur in the one problem (No. 51) in the Rhind Papyrus dealing with the triangle, a problem which is the converse of the two dealt with above: "If you are told: A triangle of 10 *khet* on its length (*nrît*) and 4 *khet* in its breadth (*tp-r*), what is its area?.....(answer) its area is 2 (thousands-of-land)."

² The lower part of this line is broken away; but the general dimensions of the papyrus show that there was no room for any further working-out.

³ Rendered, however, in our plates of transcription as a short stroke.

Egyptians measured slope by the number of units of length one must move in a horizontal direction in order to rise or fall a single unit in the vertical direction¹, then "an *ideb* of $2\frac{1}{2}$ " is a reasonable expression for the ratio $BD : BC$, in which BC is regarded as being unity, and it is exactly parallel to our "slope of one in $2\frac{1}{2}$."² When, however, the converse ratio $BC : BD$, i.e., $1 : 2\frac{1}{2}$, had to be expressed the technical term *ideb* was no longer suitable, for this was not the ratio by which the Egyptian was accustomed to measure slope.

For our knowledge of the Middle Kingdom geometry of the triangle we now have four documents: *Rhind Pap.*, No. 51, *Moscow Pap.*, Nos. 7 and 17, discussed above, and No. 4, unpublished and incomplete, but of the same nature as *Rhind Pap.*, No. 51³. On these the following general remarks may be made:

1. They make it certain that the Egyptians of the period knew of the properties of the isosceles triangle which we should express by the following equations (a = area, h = height, b = base):

$$a = h \cdot \frac{b}{2}; \quad h = \sqrt{2a \cdot \frac{h}{b}}; \quad b = \frac{b}{h} \sqrt{2a \cdot \frac{h}{b}}.$$

2. There is nothing to show that these calculations were restricted to isosceles triangles. In the formulation of the problems the general word *špdt*, "triangle," is used, and the solutions, both in the terms used and the methods employed, apply equally well to any sort of triangle. The figure attached to the Rhind problem is, it is true, isosceles; but that attached to *Moscow Pap.*, No. 17, is definitely scalene⁴, as is the determinative of the word *špdt* in *Moscow Pap.*, Nos. 4, 7, 17. In the absence of any evidence to the contrary, we may take it as quite probable that the calculations summarized in the preceding paragraph were known to be valid for all triangles.

Problem No. 14.

(Transcription, Pl. xxxvi.)

Example of calculating a truncated pyramid.

If you are told: A truncated pyramid of 6 for the vertical height by 4 on the base by 2 on the top:

You are to square this 4; result 16. You are to double 4; result 8. You are to square this 2; result 4. You are to add the 16 and the 8 and the 4; result 28. You are to take $\frac{1}{3}$ of 6; result 2. You are to take 28 twice; result 56. See, it is of 56.

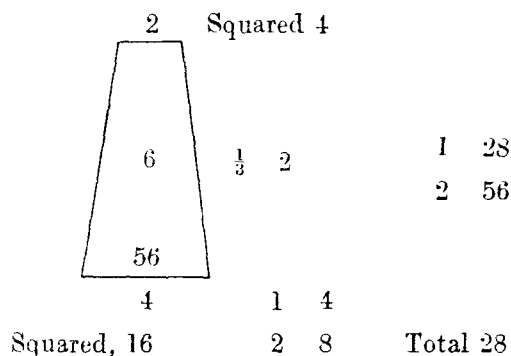
You will find (it) right.

¹ This is certainly the point of view adopted in calculating the slope of pyramids in *Rhind Pap.*, Nos. 56 to 59 B, where the batter, there called *škl*, is measured by the amount of horizontal divergence of the line of slope from the vertical in a vertical rise of one cubit.

² The parallel must not be pressed too far, for when we reach the steeper angles we reverse our phraseology and speak of a slope of 3 in 1 and so on.

³ The obscure and faulty *Rhind Pap.*, No. 53 is disregarded here. In *Rhind Pap.*, No. 52 the translation, Peet, *op. cit.*, 94-5, Gunn in *Journal*, XII, 133, of *hskt* as "truncated triangle" correctly renders the idea conveyed by the Egyptian word, but obscures the fact that we have to do, from our standpoint, not with any sort of triangle but with a symmetrical trapezoid.

⁴ That of No. 4 is damaged, but as far as it goes it resembles that of No. 17.



NOTES ON THE TEXT.

The text is well preserved and presents no difficulties.

Line 5. The first determinative of $k(\text{r})b$ has an abnormal form.

Figure. The solid is of course represented, as in the hieratic ideogram (see below), as a simple trapezoid, and in the original is roughly drawn without regard to the proportions, as in the transcription.

COMMENTARY.

The problem is to determine the volume of what we call a truncated pyramid, or frustum of a pyramid, the *data* being the vertical height (*stwti*) and the respective lengths of the sides of the two squares which bound the solid below and above.

If we call the height h and the sides of the lower and upper squares a and b respectively, the working may be represented as follows:

Square a , result 16. Multiply a by b , result 8. Square b , result 4. Add these results, total 28.

Take one-third of h , result 2. Multiply 28 by this, result 56, which is the volume sought.

Expressing these operations by a general formula, we have

$$V = (a^2 + ab + b^2) \frac{h}{3}.$$

which is exactly the formula used to-day to determine the volume of such solids.

The figure, and the numbers which accompany it, are quite straightforward. In the centre of the figure stands its height, 6. Below is the side a , namely 4, "squared, 16." Similarly above we have the side b , namely 2, "squared, 4." On the left (in the original), opposite the 6 inside the figure, we read $\frac{1}{3}$ 2, indicating that one-third of the height 6 is 2. Below on the left (in the original) is the multiplication of a and b , that is 4 multiplied by 2, and this is followed by the total, 28, of the 16, the 8 and the 4. Above this is the final step, the multiplication of 28 by 2, giving 56. This number, which is that of the required volume, is then inserted in the figure, near the base.

Preliminary to a general discussion of the problem, some remarks on the technical terms appear necessary.

(a) The word for the solid with which the problem deals is written with an ideogram, namely, as in the figure, a trapezoid \square^1 , the only possible two-dimensional

¹ The hieroglyph will have had much the same form as the hieratic sign.

By what means could the early Egyptians determine the volume of a truncated pyramid?

How did the determination, when accomplished, furnish the method of calculation which we find employed?

Now with one reserve, dealt with below, it is not a difficult matter to ascertain the volume of a given truncated pyramid¹ by experimental means, namely by the fairly obvious method of division into parts and recombination of these parts into simple solids the sum of whose volumes will give the volume of the frustum. Make a frustum of manageable size and of some easily cut substance, and divide it by four vertical cuts, each one coinciding, as to part of its length, with one side of the upper surface, as shown in Fig. 2, in which the frustum is seen from the top, the thin lines representing the downward cuts. The frustum will now have been cut into nine parts, numbered 1 to 9 in Fig 2; these parts, all of which have the height of the frustum, fall into three classes:

(a) Part No. 1, the central portion, a rectangular solid having the base equal to the upper surface of the frustum (Fig. 3, A).

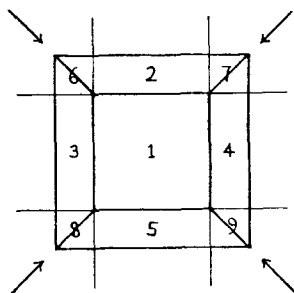


Fig. 2.

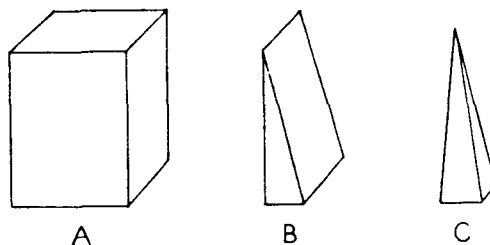


Fig. 3.

(b) The four equal parts Nos. 2, 3, 4, 5, each a wedge, in section a right-angled triangle, and having a base one side of which is equal to a side of the upper surface of the frustum, and the other side of which is equal to half the difference between the sides of the lower and upper surfaces of the frustum (Fig. 3, B).

(c) The four equal parts Nos. 6, 7, 8, 9. Each has two vertical surfaces and two oblique ones; it terminates at the top in a point, and its base, always square whatever be the proportions of the frustum, has the side equal to half the difference between the sides of the lower and upper surfaces of the frustum (Fig. 3, C).

The combinations necessary to group these solids into larger and more regular ones become obvious after a few moments' manipulation. Taking any two of the wedges Nos. 2, 3, 4, 5, and turning one of them upside-down, we find that they fit together into a rectangular solid having the same height and base as one of the wedges (Fig. 4, A). The other two wedges being similarly fitted together, and joined to the first pair with all the wedges in single file, we obtain a rectangular solid having a base double that of one of the wedges and equal in height to these (Fig. 4, B). To this we may now join part No. 1, in single file with the wedges, for, whatever the proportions of the frustum, any vertical face of the square-based part 1 will have the same breadth as that of the

cases, by his assumed method of trial, and arrived easily at the discovery that it was a general formula. In other words, the application of a general formula is just as clear and certain here as it is in those problems in which the area of a circle is taken as the square of $\frac{8}{9}$ of the diameter.

¹ Called below "the frustum" for short. That it is on a square base is of course understood.

vertical rectangular faces of the wedges, and the heights of all the parts are equal. We have now built up a rectangular solid equal in height to the frustum, and standing on a base the sides of which are respectively equal to the sides of the lower and upper surfaces of the frustum (Fig. 4, C).

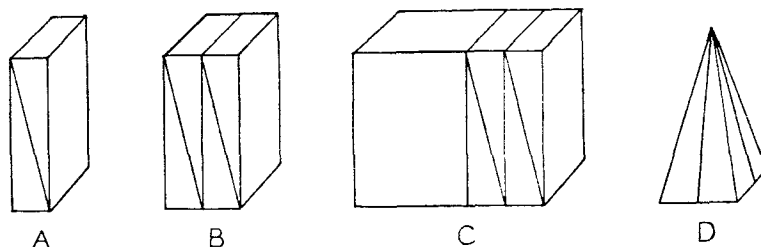


Fig. 4.

Turning now to the four parts Nos. 6, 7, 8, 9, we find that if they are pushed together in the directions shown by the arrows in Fig. 2 until all their vertical faces are hidden and in contact with each other, they constitute a true pyramid having the height of the frustum, and a square base the side of which is equal to the difference between the sides of the lower and upper surfaces of the frustum (Fig. 4, D).

By a method remote from those of pure geometry, let us say by cutting up a lump of half-dry Nile mud with a piece of stout thread, we have now converted a frustum into a rectangular solid and a pyramid. To find the volume of the former is of course an elementary matter¹, and provided that we also know how to determine the volume of the pyramid (the reserve made above), we have only to add the two volumes to get that of the frustum.

Now there is no direct evidence, from the mathematical documents or other sources, that the Egyptians knew the very simple calculation required to determine the volume of a pyramid; yet it is almost inconceivable that they did not. Being accustomed, from the Third Dynasty onwards, to construct large pyramids in stone and brick, and it being of the greatest importance to know in advance the amount of material, and hence of labour and time, that these buildings would require, they will certainly have made every effort in their power to solve the problem. Here again experiment yields the secret. If, again with Nile mud and a thread, we attempt to find it by dividing a model pyramid into parts and combining these, no useful results follow, because there will always be polyhedra which refuse to make up into simpler solids. But the obvious way to make a small pyramid of some fairly soft substance is to take a rectangular solid on a square base (parallelepiped) and with two slanting downward cuts passing through the middle line OO' of its upper surface to separate it into a central triangular prism with a wedge on each side of it, as shown in Fig. 5 *a*. Next, without removing the wedges from the prism, make two similar cuts passing through the line XX' at right angles to OO' . The result will be to divide the whole solid into nine parts. In the

¹ Just as the area of a rectangle can be shown graphically to be length \times breadth, so too the volume of the rectangular solid can be shown by experiment to be length \times breadth \times height. As the computation of the former requires only the conception of square measure, so that of the latter requires only the conception of cubic measure. It would seem that Egyptian writers on mathematics took this knowledge for granted, for we nowhere find the volume of a rectangular solid as the subject of a problem, although there are of course a number of problems which incidentally involve this determination.

centre will remain a pyramid, visible in Fig. 5 *b*, on a square base, and of the same height as the original parallelepiped. Resting against its four sides we shall have four equal tetrahedra, two of which are shown detached in Fig. 5 *b*. Between each pair of these tetrahedra is another tetrahedron (e.g., $OPX'B'B$ in Fig. 5 *a*) whose vertex B is one of the corner points of the square base of the original figure, whose base is a square, $OPX'B'$, forming a quarter of the upper surface of the parallelepiped, and one of whose edges BB' is at right angles to this base. The position and shape of these last four tetrahedra can easily be imagined from Fig. 5 *c*, where they have been removed, leaving only the central pyramid with the other four tetrahedra attached to its sides.

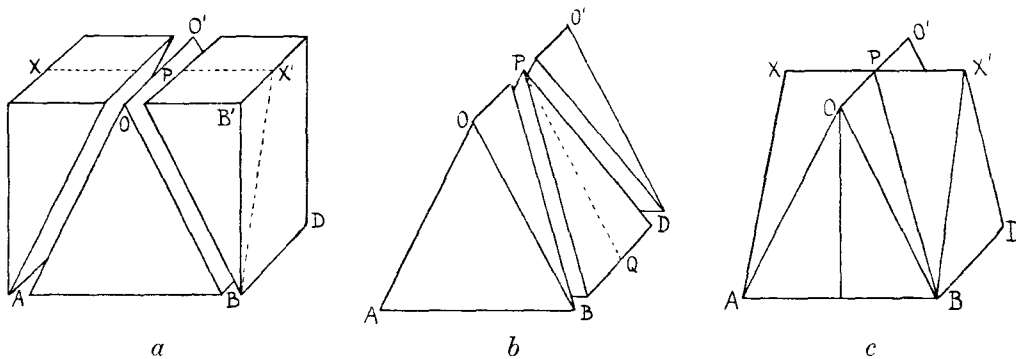


Fig. 5.

Now it is obvious that these four corner tetrahedra, $OPX'B'B$, etc., can be fitted together (exactly in the manner of those which we obtained by cutting up a frustum of a pyramid, p. 180) to form a pyramid precisely similar and equal to that left in the centre of the parallelepiped. We have thus dissected our parallelepiped into two equal and similar pyramids and four tetrahedra¹. This result may well have suggested to the

¹ Modern geometry can deal with the problem very neatly at this point. For suppose we take the central prism left in Fig. 5 *a* after the detachment of the two wedges one on each side and halve it symmetrically by a plane parallel to those of its two triangular ends, passing through the middle point P of its top edge. Let $ABQR$, Fig. 6, be the rectangular base of this figure and OP its top edge. Now let two cuts be made, one in the plane PAB and the other in the plane PAQ . The figure is now separated into three tetrahedra, $PABO$ (which is the same figure as that detached in the foreground in Fig. 5 *b*), $PABQ$ and $PARQ$ of which the last two together make up half the pyramid in the centre of Fig. 5 *b*. But these three tetrahedra are all equal, since each pair stands on an equal base and is of the same vertical height. Hence the tetrahedron $PABO = \frac{1}{2} (PABQ + PARQ) = \frac{1}{2}$ the solid $PABQR$, which solid is clearly half the pyramid of Fig. 5 *b*. Thus the four such tetrahedra formed by the construction of Fig. 5 are together equal to the central pyramid.

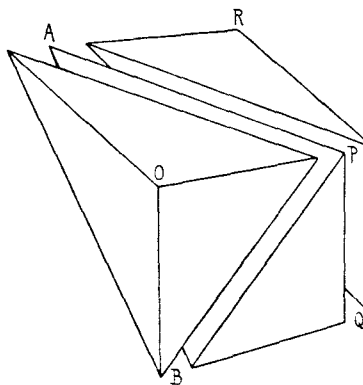


Fig. 6.

We are not prepared to assume that the Egyptians were aware of the theorem on which this result is based, namely that two solid figures of the same type on equal bases and of the same vertical height are equal in volume. On the other hand there can be little doubt that they did experiment in cutting up solid figures, just as they also doubtless experimented in cutting up papyrus figures in two dimensions, and the dissection of a prism by the very simple method described above, followed by the discovery that the three dissected portions were of the same weight, and therefore of the same volume, may have afforded material for fruitful thought.

Egyptian the possibility of some constant relation between the volumes of the pyramids and that of the parallelepiped from which they were cut, and since the four remaining tetrahedra cannot be combined into any simpler solid we may suppose that he had recourse to weighing, which would at once reveal the fact that the four tetrahedra are together equal to each of the two pyramids. Consequently each pyramid is one-third of the original parallelepiped in volume, or $V = \frac{\text{height} \times \text{base}}{3}$.

We see, then, how the Egyptian could easily find out that the volume of a given frustum is the sum of the volumes of two solids both having the height of the frustum; one a rectangular solid the base of which has the sides of the lower and upper surfaces of the frustum, and the other a pyramid the base of which is the square of the difference between the sides of the lower and upper surfaces of the frustum. Knowing how to find the volumes of these solids, he would be able to say that the volume of a frustum is equal to the lower side times the upper side times the height, plus one-third of the square of the difference between the lower and upper sides times the height, or as we should express it, calling as before the height h , the lower side a and the upper one b : $V = (a \cdot b) h + \frac{(a - b)^2 h}{3}$.

To simplify¹ the formula thus arrived at it would first be necessary to know that the sum of two or more products having the same multiplier is equal to the product of the sum of the multiplicands and the common multiplier—the “distributive law” which we symbolize by the formula $ax + bx = (a + b)x$. This was well known to the Egyptians, and is implied notably in the calculations contained in Nos. 62, 63 of the Rhind Papyrus. It underlies even simple calculations of book-keeping, such as that the total number of loaves consumed by gang *A* of 13 men, each of whom consumes 8 loaves, and gang *B*, of 18 men, each of whom consumes the same amount, can be ascertained most simply by adding 13 and 18 and multiplying the sum 31 by 8.

This being the case, we can see how the matter would be simplified by making the height the multiplier of all the rest, and recasting the calculation thus: the volume of the frustum is the lower side times the upper side, added to one-third of the square of the difference between the lower and upper sides, the whole multiplied by the height; or, as we should put it, $V = \left\{ a \cdot b + \frac{(a - b)^2}{3} \right\} h$.

At this point the Egyptian, whose solutions of problems were often very cumbrous, might well have rested content; that this was not the case was perhaps due to the fact that the quantities now collectively multiplied by the height may be regarded as areas, expressible in terms of the sides bounding the upper and lower *horizontal* surfaces of the frustum. One of these areas, indeed, is the rectangle formed by the longer and shorter of those sides, the other is one-third of a square of which the sides are equal to the difference between those sides. The Egyptian mathematician may have felt that just as it had been necessary to split up the solid frustum and recombine its parts to obtain its volume, so something might result if he drew out these areas and attempted

¹ The writers are entirely indebted to Mr. R. Engelbach for the essentials of the following method of resolving, by very simple means, the experimentally ascertained volume of the frustum into the formula of the Moscow Papyrus. The method is intentionally presented in the most concrete way possible; the Egyptian investigator may have reached his end partly or wholly by more abstract methods, but it is not necessary to assume this.

to combine them. But here he would meet with a difficulty, for the second of these two areas is equal to one-third of a given square; either it must itself be a square the side of which it would in most cases be impossible to determine exactly, or it must be some other rectangle the proportions of which would be optional, and which would therefore be quite unsuited to serve in the establishment of a general formula. This difficulty could be removed by multiplying the two areas by three and dividing their multiplier, the height, by the same number, on the principle that the product of two quantities remains unaltered if one be multiplied and the other divided by the same number: $x \cdot y = xz \cdot \frac{y}{z}$.

Here, again, the writers are unable to point to any definite evidence that this principle was known to the Egyptian, but it is such a simple one that it is difficult to believe that he was ignorant of it. If it be granted that he could and did apply it here, the resulting formula would run: the volume is equal to the lower side times the upper side, multiplied by three, together with the square of the difference between the lower and upper sides, the whole multiplied by one-third of the height¹; or

$$V = \{3ab + (a - b)^2\} \frac{h}{3}.$$

His chances of finding another formula would now be improved by the fact that not only, by the elimination of square root, are his areas easy to draw out, but he has now four of them to manipulate instead of two. Taking, for example, $a = 5$, $b = 3$, he would have three rectangles each 5×3 , and one small square with side 2 (Fig. 7).

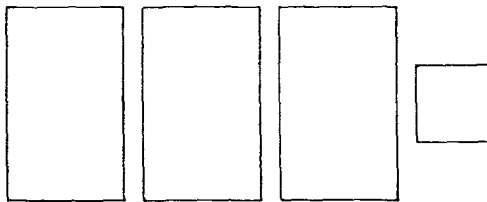


Fig. 7.

Drawing these figures to scale, and perhaps cutting them out of papyrus, he would now have to see into what other figures they might combine. Once he had combined them in such a way that two of the rectangles and the square had a disposition similar to that in Fig. 8, with the third rectangle in *any* position relative to this group (*e.g.*, in such combinations as those shown in Fig. 9²), he could hardly help seeing that the two rectangles and square together formed two squares equal to the lower and upper square surfaces of the frustum respectively, and that one of the $a \cdot b$ rectangles was left over. After ascertaining that this held good with frusta of various proportions, he would be able to say: the volume of a frustum is equal to the square forming its lower surface, added to the square forming its upper surface, added to the product of the sides of its upper and lower surfaces, the whole multiplied by one-third of the height. All that would remain would be to range the first three quantities in descending order of magnitude (for, given $a > b$, then $a^2 > ab > b^2$), and he would have reached the elegant formula $V = (a^2 + ab + b^2) \frac{h}{3}$ which we find in the Moscow Papyrus and which is used to-day.

¹ This conversion would doubtless suggest itself more easily to him if "one-third of the height" already entered into the formula for determining the volume of a pyramid, *i.e.*, if that formula were $\text{base} \cdot \frac{h}{3}$ rather than $\frac{\text{base} \cdot h}{3}$ or $\frac{\text{base}}{3} \cdot h$.

² There are four other dispositions similar to these, and an indefinite number of less compact ones.

To be able to determine the volume of a truncated pyramid was specially important to the Egyptians, for, as Mr. Engelbach points out, an obelisk is a tall truncated pyramid surmounted by a small pyramid of greater batter, and for successfully removing it from the quarry-bed and transporting and erecting it, it was very necessary to know its exact weight. There were also large masonry plinths of the sort referred to on p. 178, note 2 above, of which it would be most useful to know the exact volume before building.

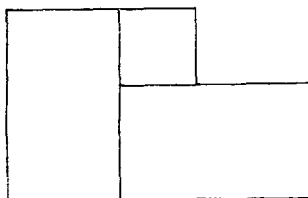


Fig. 8.

Scale double that of Fig. 9.

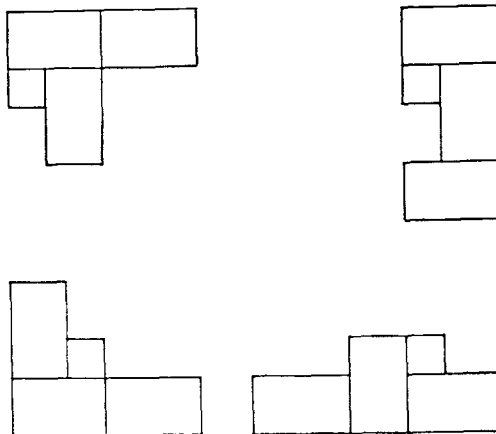


Fig. 9.

That the present writers have appended such lengthy commentaries to their translations of the four problems results chiefly from the extremely summary form of the solutions, which has made a good deal of interpretation necessary. For these solutions, like those of the other geometrical problems extant, deal only with the numbers or measures contained in the problems set¹; the mathematical author directs his reader to perform certain operations to arrive at the answer, but gives him no reasons² for these with reference either to the particular problem or to general geometrical principles. In fact, the geometrical problems are treated purely as arithmetical ones.

One wonders how the ancient student used these texts. It is very probable that they were not his sole source of knowledge, but that he also received oral instruction from a teacher. But did the student necessarily learn from his master the geometrical principles underlying the written solutions? or was he not to concern himself (unless specially interested) with principles or reasons, but to acquire from the texts a mere rule of thumb by which to attack analogous problems as best he might?

There is an indication—it can hardly be called evidence—that the latter was the intention of the compilers of mathematical handbooks. It will have been noticed that the numbers and quantities given in the problems set are those which lead to the simplest answers consistently with the easiest working out—a feature which is slightly irritating to the modern reader. In No. 6 the breadth of the enclosure is to be $\frac{3}{4}$ of the length, *i.e.*, the sides are to be as 3 to 4, so the area is given as containing 12 units

¹ Exceptions: "you are to double the area," *Moscow Pap.*, No. 7; "you are to combine its base with the cut side," *Rhind Pap.*, No. 52; "you are to divide one cubit by the batter doubled," *ibid.*, No. 57; and perhaps the references to "its rectangle," *ibid.*, Nos. 51, 52.

² Exceptions: "you are to reckon with 8 to find 6, for this is half the height," *Rhind Pap.*, No. 59, and similar explanations in No. 57 and in a geometrical problem (unpublished) of the *Moscow Papyrus*.

in order that the number of which the square root has to be taken may be the very easy one 16, and that the answer may be that the sides are 3 and 4. In Nos. 7 and 17 the lengths of the triangles are to be to their breadths as is 5 to 2; consequently their areas are given not as 1 but as 2 thousands-of-land, so that the number from which the square root has to be taken may be not the difficult 50 but the easy 100, and the answers, 10 by 4 *khet*, are only double the simplest ones possible. In No. 14 the dimensions of the frustum are double the very simplest ones conceivable, which would be lower side 2, upper side 1, height 3, and these were probably avoided so that the student might not be confused by the unique square $1^2 = 1$. A like simplicity characterizes most of the other geometrical problems. Now from our standpoint this simplicity is a defect; we feel that some difficult divisions and square roots would have been more instructive to the student as showing that the problem does not depend for being solved on containing only fours and sixes and hundreds, and that in the case of square roots he would see what degree of accuracy was expected when the roots would not "come out" exactly.

The present writers suggest that this elementary simplicity was given to the problems that they might be the easier to learn by heart; that the education of the student consisted partly in his committing them to memory in order to be able to apply them, *mutatis mutandis*, to similar ones that might arise. A person who used Moscow No. 14, for example, in this way would be under no necessity of understanding the principles involved in the solution; confronted with a truncated pyramid of different size and shape, he need but substitute its lower side, upper side and height for the 4, 2 and 6 of his memorized model to reach the correct answer mechanically. Obviously the form in which we find the problems is extremely well adapted for this purpose, for the simpler the numbers given and the answer, and the easier the working out, the better they will be remembered; and even if the student understood the principles involved, it would be unnecessary to include them in what is to be memorized.

If this view be correct, the geometrical "problems" (and not only the geometrical ones) of the Middle Kingdom treatises are to be regarded not as problems containing formulae but as formulae to be applied to the solution of problems.

The writers cannot conclude without testifying their indebtedness to Mr. R. Engelbach, not only for many suggestions embodied in the text, but in particular for a contribution of such magnitude and importance (see p. 182, note 1) that his name should rightly stand at the head of the article as joint-author.

A NOTE ON THE EGYPTIAN MUMMIES IN THE CASTLE MUSEUM, NORWICH


By WARREN R. DAWSON

With Plate xxxvii.

For many years the Castle Museum, Norwich, has possessed two Egyptian mummies that have long been familiar objects to visitors. The collection has lately been enriched by the addition of a third specimen, the gift of H.M. the King. On the 30th March 1929 the Curator, Mr. Frank Leney, was kind enough to allow me facilities for a thorough examination of these interesting specimens, and as no account of them has hitherto been published, I now offer a full description of one of them, and some notes upon the other two.

I. The Mummy from Sakḥārah.

This mummy, in a wooden anthropoid coffin, was presented to the museum on the 11th December 1827 by James Morrison, M.P.¹ It had apparently been unrolled before it came into the possession of the museum. Morrison presented another mummy a few years later to London University, and mention is made of this second specimen by Pettigrew in his famous book, but he makes no reference to the Norwich mummy and had apparently never seen it².

The coffin is typical of the Saïte Period (Twenty-sixth Dynasty, 663–525 B.C.) and is of the "pedestal" pattern then in vogue. The style of the decorations and the orthography of the inscriptions are also quite unambiguous as to date. It was made for a man named , *Heribrer*, but the mummy within it is that of a woman. Whether this substitution was carried out by the Egyptians in antiquity or by their modern successors we do not know, as nothing appears to have been recorded of the finding of this mummy. Modern Egyptian antiquity dealers when selling a mummy-case will often substitute for its original inmate another mummy if the former is in poor condition. Such substitutions are very obvious when we find, for instance, an Eleventh Dynasty mummy in a Twenty-sixth Dynasty case. It seems likely, however, that the ancient Egyptians themselves are responsible for the usurpation of Heribrer's coffin, for the mummy within it is, as we shall see, of the same period.

The Norwich mummy had been unrolled before it reached the museum, but it has

¹ James Morrison was born in 1790 and died in 1857, and was a very remarkable man. From modest beginnings he rose to great eminence in commercial life and had a distinguished political career. He amassed a large fortune and made an extensive collection of antiquities and works of art. For one year he was Treasurer of the Zoological Society. See P. Chalmers Mitchell, *Centenary History of the Zoological Society of London* (1929), 63, and *Dict. of National Biography*, XIII, 1005.

² *History of Egyptian Mummies* (1834), Introd. xx. I have recently published a portrait of Pettigrew in *Mémoires de l'Inst. d'Égypte*, XIII (1929), Pl. i.

been rewrapped by replacing the bandages in an arbitrary manner so as to expose the face and the right hand. The mummy is that of a woman, probably under middle age¹, and of small stature (5 feet)². It is very dark in colour owing to the lavish use of black, pitch-like resin³.

The head was formerly completely covered by a hard carapace of resin-impregnated linen. This still adheres to the hinder portion of the head, but it has been removed from the face and from the top of the skull. The face is black, but the skin is reddish on the forehead, where there is the well-marked impression of a linen fillet once bound tightly round the brow. The hair has been cut short like a man's, and is of an auburn shade. The ears are still embodied in their resinous covering, and it is accordingly not possible to ascertain whether the lobules have been pierced. The eyelids are open, and the sockets filled with a packing of linen pushed in over the collapsed eye-balls. No artificial eyes have been inserted in the orbits, as was customary in the Twenty-first and Twenty-second Dynasties.

The brain has been removed through the nostrils, the ethmoid bone having been pierced on both sides of the septum. The skull is full of packing material, probably linen dipped in resin, as it is somewhat springy when pressed with a probe. There is no packing in the nasal fossae.

The lips are parted, and expose the incisor teeth. The upper teeth project considerably over the lower, like those of the royal mummies of the Tuthmoside period. The head is inclined somewhat towards the right shoulder.

The arms are laid at the sides of the body: the hands, with fingers extended, resting on the frontal aspect of the thighs. The right hand has been broken off at the wrist. The fingers still retain the innermost linen bandages, but the thumbs are uncovered and show the "thimble" of epidermis which was carefully cut to retain the nails when the rest of the epidermis peeled off in the macerating bath. The nails are rather long, but neatly trimmed. I did not examine the feet, as I wished to avoid disturbing the wrappings as far as possible.

I removed the bandages so as to expose the chest and pubic region. The innermost bandages, impregnated with black resin, still adhere to the skin. There is a small puncture (accidental; not made by the embalmers) in the chest, and through this I inserted a probe and found that the thorax had been eviscerated and a small quantity of packing material inserted in the vacant cavity. I had no means of ascertaining whether the heart was *in situ*. It was usual to leave the heart in place attached to its great vessels, and not to remove it with the other organs of the chest. The embalming-wound in the left flank is very difficult to discern, owing to its edges having been brought into apposition, and the whole area covered with adhesive linen and resin. So far as it can be made out, the embalming-wound (through which all the thoracic and abdominal viscera were removed) seems to have been a slightly oblique incision, about

¹ It is possible to give a fairly accurate estimate of age only in cases where the bones are available for examination. The evidence of the teeth cannot be relied on, as the coarse food eaten by the Egyptians often caused severe wear of the teeth even in early life.

² This is below the average for European women. The average height of twelve adult ancient Egyptian women of various periods from the Eighteenth to the Twenty-sixth Dynasties whose mummies have been measured is 1.556 metres (=5 ft. 1 in.). Some allowance must of course be made for the shrinkage resulting from the embalming-process.

³ I take this opportunity of repeating that resin, and not bitumen, as commonly stated, was the staple embalming material.

3½ inches long, its upper end slightly below the level of the navel, and its direction nearly parallel to the line of the groin.

The body-wall of the abdomen has been broken in the region of the symphysis pubis, and through this gap it was possible to observe large masses of linen that had been inserted into the abdominal cavity as packing material after the removal of the internal organs¹. The pudenda and perineum are free from the linen and resin that elsewhere adhere to the body, and they were evidently originally covered by a linen pad, a device that was customary in preparing female mummies. The labia majora have been pushed inwards and in close apposition, so that the rima pudendi is inconspicuous. There is, of course, no trace of pubic hair: this was lost with the epidermis during the macerating process.

The body was originally wrapped in large quantities of linen of various textures and of excellent quality. This linen has been distributed over the body by those who first unrolled the mummy, and some large pieces, 8 to 12 inches in breadth, placed transversely over the mummy so as to give it a neat appearance for exhibition. The right hand, which now protrudes from the bandages, was originally, of course, concealed beneath them.

The general method of treatment resembles that of Theban mummies of the same period, and the details of technique allow us to date the mummy to the Saïte period. A Theban mummy of this period that I recently examined in the British Museum conforms almost exactly to the same details². There are, however, certain differences which may probably be assigned to variation in the local methods of technique. The British Museum mummy had been treated with resin of a better quality, for the skin was not darkened to the same extent, and the bandages came away clean from the body, whereas in the Norwich mummy they are tightly adhesive over the greater part of the surface. It would appear that the innermost wrappings had been dipped in very thick, dark resin and applied while the resin was "tacky." There are two features present in the Norwich mummy that were retained at Saqqârah as survivals of earlier methods after they had been discontinued at Thebes. These are: the head-fillet, general in the Twenty-first and Twenty-second Dynasties, and still surviving in the Twenty-fourth at Thebes, though abandoned after that date³; and secondly, the filling of the eye-sockets with linen packing, a feature usually absent from Saïte mummies from Thebes, although common in earlier periods.

II. The Mummy of Nesmin from Ekhnîm.

The wrappings of this mummy have never been disturbed, and consequently no examination of the body is possible; but it is, externally at least, a good specimen of the embalmer's art in Ptolemaic times. It is an excellent example of the degeneration in the use of cartonage casing. During the Pyramid age it was customary to paint the features of the mummy on the outermost wrappings of the face in order to perpetuate the personal identity of the deceased. In the Eleventh Dynasty the same object was attained by modelling a head-piece made of a kind of paste-board known as cartonage,

¹ This breakage of the body-wall was not done by the embalmers. It is an accidental fracture made in modern times, probably in the attempt to remove the tightly adhesive wrappings.

² *Journal*, xiii (1927), 156-159.

³ W. R. Dawson, *Proceedings of the Society of Antiquaries of Scotland*, lxi (1927), 295-296 [Twenty-fourth Dynasty mummy at Edinburgh].





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1. Mummy of 'Ankh-Hor in its cartonnage casing.
2. Lid of the mummy-case of 'Ankh-Hor.

In the Castle Museum, Norwich.

which, like the earlier painted examples, was intended to be a portrait of the dead man. From this beginning was evolved the anthropoid coffin of the familiar type on which the features and ornaments of the deceased were detailed with great elaboration. In the New Kingdom, the cartonage head-piece had given place to a complete shell of cartonage, covering the whole of the mummy. This "one-piece suit" was laced up the back after the mummy had been placed within it. The Norwich Museum possesses an excellent specimen of this kind in the next mummy to be mentioned. The one-piece cartonage case persisted until the Thirtieth Dynasty and into early Ptolemaic times, but it soon degenerated into four or more separate elements. The head-piece, made separately, reverted to the Eleventh Dynasty type, consisting of the face surrounded by a heavy wig. The breast-ornaments were designed on a second piece, or group of pieces, those of the legs on a third, whilst the feet were enclosed in a fourth piece of cartonage, known as the "boot," on the sole of which the sandals are usually depicted with great elaboration. The separate pieces of cartonage were sewn on to the outer shroud, which was often dyed red¹. The mummy of Nesmin is a good example of this procedure.


Ekhmîm, or Akhmîm, from whence this mummy was obtained, stands on the site of the ancient Khemmis, the Panopolis of the Greeks, which was the capital of a separate Nome. The Egyptians named it , *Epu*, also , *Khenti-Min* (with many variants of spelling), after its god, the ithyphallic Min²: whence are derived the Coptic *shmin*, *Shmin*, and the modern Arabic *ʿEkhmîm*. When the late Sir Gaston Maspero explored the site of the necropolis of this town more than forty years ago, he wrote: "Jamais cimetière antique ne mérita mieux que celui d'Akhmim le nom de nécropole. C'est vraiment une ville, dont les habitants se comptent par milliers et se lèvent tour à tour à notre appel, sans que le nombre paraisse en diminuer depuis deux ans. J'ai exploré la colline sur une longueur de trois kilomètres au moins, et partout je l'ai trouvée remplie de restes humaines. Non seulement elle est percée de puits et de chambres, mais toutes les fissures naturelles, toutes les failles du calcaire ont été utilisées pour y déposer les cadavres³." The city of Ekhmîm was one of the oldest in Egypt, and tombs of all periods from the Old Kingdom to the age of Christianity have been found there⁴.

III. The Mummy of 'Ankh-Hor.

This fine specimen of a mummy in its intact cartonage casing, together with the lid of its wooden coffin (Pl. xxxvii), was presented to Norwich Museum in 1928 by H.M. the King. The mummy had been for some years at Sandringham House.

I assumed at first that this mummy was one of the nineteen brought to England in 1869 by King Edward VII, after his visit to Egypt (as Prince of Wales) in 1868. All these latter, however, belonged to the Twenty-sixth Dynasty and were typical examples of the period⁵. They have been dispersed to various collections. A careful examination of the cartonage and of the coffin-lid, however, at once convinced me that in spite of

¹ For examples of Ptolemaic mummies fashioned in this way see Elliot Smith and Dawson, *Egyptian Mummies*, frontispiece (in colour); *Arch. Survey of Nubia, Report for 1908-9* (1912), Pls. 26-28, 30, 32; op. cit., *Report for 1909-10* (1915), Pl. 26, etc.

² The name of the man whose mummy has just been described, , *Nesmin*, means "belonging to Min."

³ *Bulletin de l'Inst. Égyptien*, 2nd ser., VI (1885) = *Études de mythologie*, I (1893), 215.

⁴ P. E. Newberry, *The Inscribed Tombs of Ekhmîm*, *Liverpool Annals*, IV, 99-120.

⁵ They were described by Samuel Birch, *Trans. Royal Soc. of Literature*, new ser., X (1870), 1-29.

the label, "Twenty-sixth Dynasty or later," the Norwich mummy and its case are in reality some three centuries earlier in date, and must be assigned to the Twenty-first or Twenty-second Dynasties. The workmanship of the coffin, the nature of the scenes and decorations and the orthography of the inscriptions do not tally with the fashions of the Twenty-sixth Dynasty but are comparable with those revealed by the coffins and mummies of the Twenty-first and Twenty-second Dynasties of which so many examples now exist in various collections. A great many finds of mummies of this latter period have been made during the last hundred years, the largest being the great "haul" of 152 mummies made at Dêr el-Bahrî by Grébaut in 1891¹. Further deposits of mummies of this period have been found during the last ten years in the same district.

On the coffin-lid is represented the weighing of the heart from the Book of the Dead, and it is depicted in the style usual in the funerary papyri and coffins of the period. The female divinity with three heads (lion, crocodile and brazier) is a graphic abbreviation for three demons usually represented separately and which are, together with others, very commonly seen in Twenty-first Dynasty funerary scenes, as is also the large serpent in front of the throne of Osiris². Beneath the weighing-scene is the text of the so-called "Negative Confession," in which 42 gods are invoked and a disclaimer for the committal of a specified sin associated with each. The order in which the names of the gods is given is here very promiscuous. Those that are usually first in the list in the texts of the New Kingdom are here written in the lowest register, just above the feet. The text in this example does not follow either the approximate order of the earlier copies, nor the definite sequence adopted in the Saïte Period.

The mummy is that of a priest of Amûn named $\frac{\text{𓂏}}{\text{𓂏}} \frac{\text{𓂏}}{\text{𓂏}} \frac{\text{𓂏}}{\text{𓂏}} \frac{\text{𓂏}}{\text{𓂏}}$, *Ankh-Hor* ("Horus lives"), and it and the coffin are in a perfect state of preservation. The ornamentation has been carried out by the ancient craftsman with great care, and the realism of the face, both of the cartonage mark and of the coffin, is enhanced by life-like inlaid artificial eyes. On the surface of the coffin-lid, the prominences of the knees are very skilfully rendered.

¹ G. Maspero, *Guide du visiteur au Musée du Caire*, ed. 4 (1915), 274 ff.; G. Daressy, *Ann. Serv.*, I (1900), 141 ff.; *op. cit.*, VIII (1907), 3 ff.

² E. Chassinat, *La seconde trouvaille de Deir-el-Bahari: 1^{re} partie, Sarcophages* (1909), *passim*; G. Daressy, *Cercueils des Cachettes Royales* (1909), Pls. 44, 48, 56, and often; Budge, *The Greenfield Papyrus* (1912), Pl. 108; Blackman, *Journal*, V (1918), Pls. 4, 5; Mariette, *Papyrus de Boulaq*, III, Pls. 19-21; *Pap. Louvre* 3287; and many other examples.

THE EVOLUTION OF VELAR, PALATAL AND DENTAL STOPS IN COPTIC

BY W. H. WORRELL

The confusion between κ and σ in Coptic is a serious obstacle to an equal mastery of Boheiric and Sahidic. The relationship between words in the two dialects and in Egyptian does not at once appear. Tables have to be consulted, tables which are not easily rationalized.

This confusion exists, partly because the problem is itself complicated: partly because discussion of it so often fails to consider sounds, and so often stops with being merely descriptive. *E.g.*: the table on p. 16 of Steindorff's *Koptische Grammatik* (2nd ed., 1904) equates symbols, not sounds, and is merely descriptive. So also the various sections therein referred to. We do not learn the true, or hypothetical, values of the conventional symbols in terms of precise phonetics. The terminology is vague. What is a "guttural"? Evidently a velar, since here we find κ and σ . But on p. 7 we read that σ has the phonetic value of "*tsch*, jetzt *sch*": therefore not velar after all. Of course, the velar value is derived from the observation of Sahidic orthography, while the palatal value comes from the actual pronunciation of modern Boheiric (probably) as observed and set down by Stern (*Koptische Grammatik*, 1880, 16). The beginner in Coptic pays little attention to this section of grammar, and proceeds to learn the usual pronunciation, which is really Boheiric applied to Sahidic. The resulting conventional pronunciation is fatal to all reasoning about the sounds involved. Arabic transliteration shows that the probable values of κ π τ \dagger are nearer to *g b d di* than to the *k p t ti* assigned to them on pages 6-7. Not to know that they are partly voiced (mediae) or fully voiced, again blocks the way to any rationalization of the history of sound-changes. On the other hand, any attempt at rationalization must be based upon the unimpeachable observations begun by Lepsius (*Standard Alphabet*, 1868, *Zeitschr. f. äg. Spr.*, v, 71), and continued by Stern and Steindorff (*op. cit.*).

The sounds to be discussed are represented in the conventional transcription of Egyptology by the symbols *k k g t t d d*, and the first step is to decide if possible upon actual phonetic values for them.

About three of these sounds there can be little doubt: *k g t* were at one time equivalent to the Semitic sounds represented by κ γ τ , and were therefore *k g t*.

Two of the sounds are more doubtful. They are said on the whole to correspond to the Semitic sounds represented by the letters κ and τ , whose values are not certainly known; and in reality the correspondences are more complicated than that. Too much reliance should not be placed upon transliterations of Semitic words into Egyptian by practical scribes as late as the New Empire. Such a scribe would represent an unfamiliar sound by its nearest equivalent according to his local dialect. Did not the Greeks write $\Psi\epsilon\nu$ - for $\pi\psi\epsilon\nu$ - and $\Sigma\epsilon\nu$ - for $\tau\psi\epsilon\nu$ - and $\Sigma\eta\theta$ for $\tau\eta\theta$; and do they not still write $\mu\pi\alpha\lambda\kappa\acute{o}\nu\iota$ for *balcone*, simply because they have no characters for the strange sounds? The letters κ and τ may have stood for simple *k* and *t* respectively, followed by a glottal explosion, ʔ , the oldest

"emphatic" sounds, still heard in Abyssinian Semitic and in certain Hamitic languages; or they may have been "emphatics" of the Arabic kind: the first having become a voiceless velar stop, *q*, and the second a voiceless velarized dental, *t̤*. In either case they stood for *unaspirated* stops, in contrast to the normal aspirated, *k t*. We cannot tell whether the nearest sounds in Egyptian at that time were likewise *q* and *t̤*, or merely the half-voiced, unaspirated, stops *ḡ* and *ḏ*. As there is already a *g*-sound in the language, with its own sign, but no *d*-sound with its own sign, we may suppose that a voiceless uvular stop, *q*, did exist alongside of *k* and *g*; but no "emphatic" sound alongside of *t*. It would be strange to find *p* and *b*, *k* and *g*, and not *t* and *d*. If a velarized sound *t̤* ever existed, it had been absorbed by *d*, as there is no separate character for it. The velar stop *q* survived, with a special character, because it is not the same as a velarized dental, and does not share the same history. Probably all the "emphatics" of this kind had disappeared from Egyptian by the time of written fixation. There is only one other, *ḏ*, that is commonly supposed to be an "emphatic," and reasons for rejecting that supposition will be found in the next paragraph.

The last two sounds in the list, *t̤* and *ḏ*, are most difficult of all to identify. To equate them with **𐤓** and **𐤔** does not help: for, though the value of **𐤓** is *s*, the possible values of **𐤔** are many. It is hard to make any scheme of sound-change without supposing that *t̤* and *ḏ* are voiceless and voiced counterparts, otherwise identical, as any experimenter will soon discover. But **𐤓** and **𐤔** are certainly not such counterparts.

Erman, in his elementary *Hieroglyphen* (1912, 24), defines *t̤* and *ḏ* cautiously as "varieties" of *t* and *d* respectively. They could not well have been "emphatics"; for in that case *t̤* would have been the voiceless member of the pair; and, because "emphatic," would have been incapable of aspiration in Boheiric. Both its dental and palatal descendants are aspirated in Boheiric. The commonest "variety" of dental is the palatal, and the palatal may develop out of the dental or out of the velar. Supposing then that *t̤* and *ḏ* are palatals, we immediately find support in the fact that *-t̤* and *-tn*, Egyptian pronominal suffixes, are parallel to the oldest Semitic forms *-kī* and *-kinā*. The velar *k* became the palatalized velar *ḳ*, and finally the palatal, *ṭ*, under the influence of the palatalizing vowel, *i*. We may reasonably suppose then that *t̤* and *ḏ* were *ṭ* and *ḏ̣*.

In summary: *k ḳ g t ṭ d ḍ* may be given the values *q k g t ṭ d ḏ̣*.

Four changes took place in this stock of sounds: (1) Palatals became dentals, (2) The uvular became velar, (3) Velars became palatals, (4) Voiced and voiceless became confused. The first three are due to one tendency: shifting the point of articulation forward.

(1) As early as the Middle Kingdom the palatals, *ṭ ḏ̣*, in most cases became dentals, *t d*. It would be desirable to know what were the determining factors in the exceptional cases. This change is reflected in writing.

(2) Later than the above, because not reflected in the writing, the voiceless uvular, *q*, seems to have become the voiced velar, *g*, and then to have been indistinguishable from the *g*: a common change in Arabic dialects.

(3) Still later, certainly after *q* had become a velar, the velars, *k g*, became partly or wholly palatalized, *ḳ ḡ* or *ṭ ḏ̣*, in some cases. Again it would be desirable to know the determining factors. Here the northern and southern dialects diverge. In the north the new sounds seem to have become completely palatal, and therefore indistinguishable from the old palatals, *ṭ ḏ̣*. In the south they remained merely palatalized velars, *ḳ ḡ*, distinct from *ṭ ḏ̣*.

(4) At some time or other the voiced and voiceless sounds became partly or wholly indistinguishable. In the north the voiceless sounds, *k* *t̥* *t*, apparently lost their normal aspiration and became mediae, *ḡ* *ḏ̥* *ḏ*, except when protected by a strong accent or the proximity of certain semi-vocalic sounds. The voiced sounds, *g* *ḏ̥* *d*, apparently lost their normal voicing and became mediae everywhere. In the south all (voiced and voiceless) stops became mediae without exception.

The outstanding feature of Boheiric is confusion between palatalized velars and palatals; of Sahidic, confusion between voiced and voiceless.

For practical purposes the Coptic letters involved should be pronounced as follows: *In both dialects*: *κ* as though half-way between *cold* and *gold*, or exactly as south-German *Kanne*. *τ* as though half-way between *tin* and *din*, or exactly as south-German *Tinte* (also spelled *Dinte*). *ϣ* as though half-way between *chin* and *gin*—though that would be merely a convenient approximation. *In Boheiric*: *ϣ* approximately as *chin*. *ϣ* as *cold*. *ϣ* as *told*. *In Sahidic*: *ϣ* approximately as though half-way between *cure* and “*gure*.”

Manuscripts, and particularly unliterary documents, show irregularity in the operation of the principles above discussed, as though phonetic decay had left the Copts at last with many more letters than they knew what to do with.

The table which follows sums up the results.

TABLE.

<i>Boheiric</i>						<i>Sahidic</i>					
1	2	3	4			1	2	3	4		
q	q	g	g	ḡ	κ	q	q	g	g	ḡ	κ
			ḏ̥	ḏ̥	ϣ				ḡ	ḡ	ϣ
k	k	k	k	ḡ	κ	k	k	k	k	ḡ	κ
			k		ϣ						
			t̥	ḏ̥	ϣ				ḡ	ḡ	ϣ
			t̥		ϣ						
g	g	g	g	ḡ	κ	g	g	g	g	ḡ	κ
			ḏ̥	ḏ̥	ϣ				ḡ	ḡ	ϣ
t	t	t	t	d̥	τ	t	t	t	t	d̥	τ
			t		ϣ						
t̥	t̥	t̥	t̥	d̥	ϣ	t̥	t̥	t̥	t̥	d̥	ϣ
			t̥		ϣ						
	t	t	t	d̥	τ		t	t	t	d̥	τ
			t̥		ϣ						
d	d	d	d	d̥	τ	d	d	d	d	d̥	τ
ḏ̥	ḏ̥	ḏ̥	ḏ̥	ḏ̥	ϣ	ḏ̥	ḏ̥	ḏ̥	ḏ̥	ḏ̥	ϣ
d	d	d	d		τ	d	d	d	d̥		τ

A NOTE ON THE "REPEATING OF BIRTHS"

By JAROSLAV ČERNÝ

Readers of this *Journal* are aware that there exist several hieratic documents manifestly of the second half of the Twentieth Dynasty dated in the years not of a king, but of *whm ms-wt*, "Repeating of Births" or "Renewal of Births." Such a dating is so strange and completely contradictory to Egyptian custom that it has long been believed that the expression *whm ms-wt* must here conceal the name of an Egyptian king, namely that of Ramesses X, who elsewhere bears the prenomen Khepermarêr. Peet was the first¹ to recognize that this view is no longer tenable, and rightly suggested that *whm ms-wt* may designate some sort of epoch or era. He has devoted several discussions to this interesting question, but although all these appeared in the *Journal*², it is perhaps not quite useless to recall once more all the known facts before going any further into the details which have led the present writer to the conclusion found at the end of this paper.

Dating by means of the expression "Repeating of Births" occurs in five papyri:

Years 1 and 2 in Pap. Mayer A,
Year 1 in Pap. Brit. Mus. 10052,
Year 2 in Pap. Brit. Mus. 10403,
Years 4 and 5 in Pap. Turin, Cat. 1903/180, and
Year 6 in Pap. Vienna, No. 30.

It is thus evident that "Repeating of Births" lasted at least six years; but the question where in the Twentieth Dynasty this epoch is to be placed is very difficult. Fortunately in this we are somewhat helped by the text on the verso of Pap. Abbott, which is itself dated "Year 19 corresponding to (*hft*) Year 1." In the sequel the text gives a list of thieves precisely those whose trial occupies a great part of Pap. Mayer A and Pap. Brit. Mus. 10052, both of them dated, as has been said, in Years 1 and 2 of the "Repeating of Births." Consequently it seems quite legitimate to consider the Year 1 of Abbott as identical with the Year 1 of the "Repeating of Births," and further this latter as identical³ with the Year 19, probably of a king. As the recto of Abbott is dated in the Year 17 of Ramesses IX Neferkerêr, the probability has been admitted that the Year 19 of the verso refers to the same Pharaoh, and that therefore the "Repeating of Births" either followed the reign of Ramesses IX Neferkerêr or rather, in view of the word "corresponding," is another name for the part of his reign from Year 19 onwards. Plausible as was this assumption at first sight, it was nevertheless not altogether certain that the texts of both the recto and verso of Pap. Abbott were written within a short

¹ *The Mayer Papyri A and B*, 4-5.


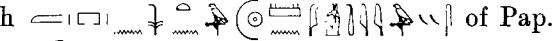

² *Journal*, xi, 40; xii, 256 and 258, and especially xiv, 65-72.

³ That *hft* of the Abbott expresses identity, is beyond all doubt. Cf. the example quoted by Gardiner, *Eg. Grammar*, § 169, 4, from Newberry, *Beni Hasan*, i, 8, 3, "Year 43.....corresponding to year 25," and note that here too the official dating precedes the local one.

space of time, and it was just possible that the Year 19 belonged to the reign of a successor of Ramesses IX, more definitely to that of Ramesses XI, whose Year 27 is attested, less probably to that of Ramesses X, whose highest known date is only Year 3. And in fact, as the personnel of the documents dated in *whm ms-wt* is different from that of the reign of Ramesses IX and points rather to the reign of Ramesses XI Menmarē, Peet in his recent discussion of the problems of the Twentieth Dynasty chronology¹ is inclined to consider the epoch of "Repeating of Births" as a part of the reign of the last Ramesses (XI). This is in the view of the present writer the only solution which explains satisfactorily three facts observable on a closer study of the documents of the "Repeating of Births."

These three facts are:

1. The occurrence of an official named Menmarēnakht, overseer of the treasury, in two documents of *whm ms-wt* (Pap. Mayer A, 1. 6 and Pap. Brit. Mus. 10052, 1. 4)². Even when we recognize the difficulty of identifying various persons occurring in the papyri of that epoch³, nobody will doubt that this Menmarēnakht must be identical with a man of the same name and title found in Pap. Turin, P.R. LXI, 6, a document which can with confidence be assigned to the reign of Ramesses XI Menmarē⁴. Now this Menmarēnakht is certainly named after a king⁵, much more probably after Ramesses XI Menmarē, than after Sethos I, who had reigned some one and a half centuries before. If so, it becomes evident that *whm ms-wt* must have followed the reign of Ramesses XI or, if not, have been contemporaneous with it.

2. Occurrence of two buildings named after a king Menmarē Sety in the documents of the epoch of *whm ms-wt*. These two buildings are:  (Pap. Mayer A, 1. 3), clearly identical with  of Pap. Brit. Mus. 10403, 1. 9, and  in Pap. Turin, Cat. 1903, verso 2. 12. The king *Mnm̄str̄ Stī* is of course Sethos I of the Nineteenth Dynasty, but the writing of his name in this form is quite exceptional and contrary to the use of the late Twentieth Dynasty. At that time a dead king was always named by his prenomen⁶, never with his nomen⁷ either alone or with the prenomen as well. The curious form Menmarē Sety instead of the simple Menmarē, which would be quite sufficient, can only be explained if we admit that at the epoch of *whm ms-wt* it was necessary to distinguish

¹ *Journal*, XIV, 71-72.


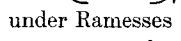
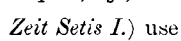

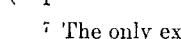
² Quoted *Journal*, XIV, 66.

³ Cf. Peet's remarks in *Journal*, XIV, 69.

⁴ For the dating cf. Peet, *ibid.*, 66.

⁵ Just as Wesermarēnakht (Pap. Turin, P.R. xxxv, 3) is named after Ramesses III, Nebmarēnakht (Abbott, 4. 15 and elsewhere) after Ramesses VI Nebmarē, and Neferkerēemperamūn (Abbott, 1. 6) after Ramesses IX Neferkerē. That Menmarēnakht must be named after Ramesses XI was seen also by Peet, *Journal*, XII, 259, note 2, though he did not dare to draw the necessary conclusion from this.

⁶ The tomb-robbery papyri of the Twentieth Dynasty contain a mass of examples. They speak of the temples of Akheperkerē, Nebmarē, Wesermarē-setepenrē, Binerē-meriamūn, Wesermarē-meriamūn, etc., never of Tuthmosis, Amenophis, Ramesses or Merenptah. So too the temple of Sethos I is called

 under Ramesses III (Pap. Turin, P.R. XLVIII, 17) and  under Ramesses IX (Pap. B.M. 10068, vs. 2. 4). The early Nineteenth Dynasty is not so rigorous in this respect, e.g., the account-papyri of the epoch of Sethos I (published by Spiegelberg, *Rechnungen aus der Zeit Setis I.*) use both  (Pap. Bibl. Nat. 209, 3, 7. 10; 211, a, 20) and  (Pap. Bibl. Nat. 209, 2, 9. 12), or  (Pap. Bibl. Nat. 211, b, 20; 211, vs. c, 5).

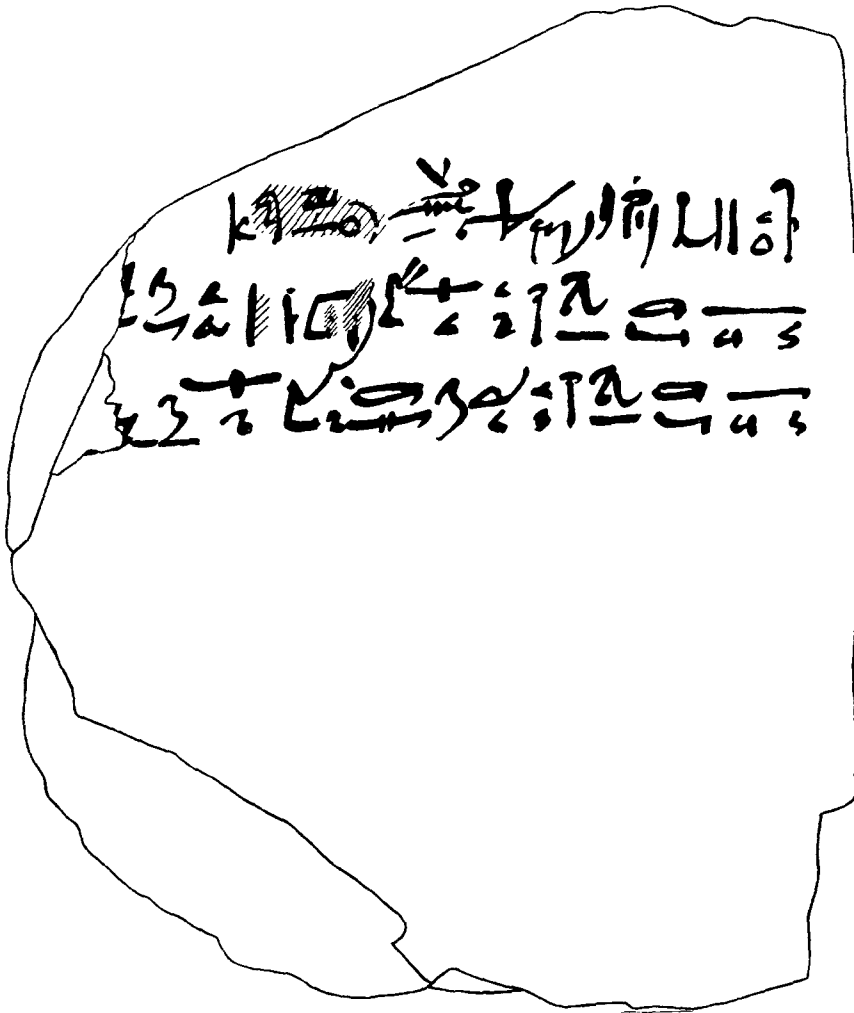
⁷ The only exception known to me is Amenophis I, who became patron of the Theban Necropolis and is mostly referred to as Amenophis *par excellence* (so too in the month name Phamenoth). His temple is named *pr Imnhtp* (e.g., Abbott 1, B 13; 2, 3. 8; Pap. B.M. 10068, vs. 1, 6, etc.).

This may be translated:




1. "Year 2 (of) the Repeating of Birth (of) the King of Upper and Lower Egypt Menmarēr.











2. What is credited in (the way of)¹ very large *inht*-vases at the descending in the possession of.....













3. What is credited in (the way of) small *inht*-vases at the great raising in the possession of....."




Lines 2 and 3 may or may not be rendered correctly, and in any case their sense is very obscure. But it does not matter. What here concerns us is the first line, which is fortunately quite plain. It contains a date of Year 2 of *whm ms-wt* which is clearly connected with a king Menmarēr. All three of us, Professors Spiegelberg, Peet and myself, felt at first no doubt that this Menmarēr was no other than Ramesses XI Menmarēr, and the question of *whm ms-wt* seemed settled: *whm ms-wt* was a part of the reign of Ramesses XI.

¹  as variant writing for the usual  occurs also Pap. Turin, P.R. L, 3. 6, where, too, the expected preposition  is omitted after it.

However, on examining the ostrakon more closely, one doubt occurred to me which I feel obliged to put before scholars: Is it certain that Menmarē^c here is Ramesses XI, not Sethos I? Firstly it is only the palaeography which allows us to decide whether the ostrakon belongs to the Twentieth Dynasty rather than to the beginning of the Nineteenth, *i.e.*, to the reign of Sethos I, who also was a Menmarē^c. Now such a criterion as mere palaeography is not absolutely reliable, especially as there are no sufficient materials for comparison, the ostrakon containing in its three lines only a very limited number of signs. It is true that the general aspect of the writing seems to be really of the Twentieth Dynasty, and the form of  without a cross above speaks for the Twentieth Dynasty, when both forms, with and without a cross, are in use, whereas the Nineteenth Dynasty, so far as I am aware, never omits the cross; the spelling of *hꜣi* without  and of *tsi* (influenced by *ts* "bind") would be rather curious in the Nineteenth Dynasty. But the spelling  instead of  is suspicious. It is so rare in hieratic that I am inclined to consider it as a peculiarity of an epoch¹. From the published documents I can quote only one instance of , Pap. Bibl. Nat. 203, 1², from the reign of Sethos I, that is from a period which would alternatively come into consideration for our text. I found several instances of the writing this year in unpublished texts. The excavations of the Institut français d'Archéologie orientale au Caire at Dêr el-Medinah in January-March 1929 furnished two more ostraca, both dated in the reign of Ramesses II, which show the same rare spelling . Lastly, an ostrakon acquired by Professor Steindorff in Luxor in the winter 1928-29 and now in the collections of the Egyptological Institute of the University in Leipzig³ bears the remains of a dating ... (  ), though here the palaeography allows the same doubts as in the case of our Cairo ostrakon.

In view of all this, it is perhaps possible that  was a writing peculiar to the period of Sethos I and Ramesses II. Moreover, the appearance at the same time of all these ostraca containing the spelling  lends some ground to my suspicion that the provenance of both Cairo and Leipzig ostraca is Dêr el-Medinah, and that they were either found by the natives in their clandestine excavations or stolen by them from the excavations of the French Institute. If this is so there seems to be a strong case for assigning the Cairo ostrakon to the Nineteenth, and not to the end of the Twentieth Dynasty. Indeed, ostraca of the latter period are even rarer at Dêr el-Medinah than those of as early a date as Sethos I; the great bulk of ostraca from that site belong to the reign of Ramesses III or thereabouts. That Sethos I did occasionally use an *whm ms-wt* dating we know from one of his inscriptions at Karnak⁴ which begins          . It is worthy of notice that the two Pharaohs who employ this dating, namely Sethos I and Ramesses XI, both bear the prenomen Menmarē^c. I imagine that Ramesses XI copied in this, for some reason unknown to us, his homonymous predecessor, just as Ramesses III in several things imitated Ramesses II. Peet's suggestion to see in *whm ms-wt* an epoch "of restoration after a period of foreign invasion"⁵ might be right after all, though the last known invasion of Libyans under Ramesses X Khepermarē^c becomes now separated from *whm ms-wt* by at least 19 years.

¹ In the words for "bee" and "honey" the group  is quite regular of course.

² Published in Spiegelberg, *Rechnungen aus der Zeit Setis I*, Pl. 1.

³ Professor Steindorff has put me under a great debt by lending me for study all the hieratic ostraca he bought in Luxor.

⁴ Cf. Gauthier, *Le livre des rois*, III, 11. Elsewhere the expression *whm ms-wt* is always included in the *N*-name, from his Year I onwards (Gauthier, *op. cit.*, III, 11, 13, etc.).

⁵ *Journal*, XIV, 67.

NOTE ON THE FEMININE CHARACTER OF THE NEW EMPIRE

BY WILHELM SPIEGELBERG

More than once has it been left to a layman to make an observation which should never have been overlooked by the specialists in a science. Mr. George Spiegelberg of Manchester, while studying the collection of statues in the Cairo Museum, made the remark, never made before, that if in the Old Kingdom a man and his wife are united in a single¹ statuary group, the wife is represented with her hand round her husband's neck, never the reverse². In the New Empire, however, though the Old Kingdom form of the representation persists, it is accompanied by two new forms, in one of which the man places his arm around his wife's neck, while in the other the embrace is mutual³.

The observation made in the Cairo Museum holds good in the case of the other material on which I have tested it. It would seem beyond doubt that the grouping in which the husband places his arm round his wife's neck, either with or without reciprocation on her part, was unknown in Egyptian sculpture until the time of the New Empire⁴.

This change of expression in art agrees perfectly with the difference of mentality between the periods in question. In the hard manly periods of the Old and Middle Kingdoms the man is the support on whom the wife leans, though she is in no sense represented in an attitude of oriental slavishness, a conception of marriage which was already fast disappearing. The New Empire, on the contrary, presents in many ways a feminine aspect, which appears at its strongest in the art of the El-'Amarnah period with its creator Amenophis IV, whose very appearance has attracted attention by its effeminacy.

Should further search bear out the absence of the later method of grouping conjugal statues in Old and Middle Kingdom monuments the difference will form a criterion for the dating of doubtful groups.

¹ Man and wife may of course be represented without any contact, or even on separate bases, *e.g.*, Sepsa and Nesa, Rahotep and Nofret.

² One of the finest examples is the famous group of Mycerinus and his consort (Schäfer, *Propyläen-Kunstgeschichte*, I, Pl. 221). For the corresponding position in design on the flat see Schäfer, *Von ägyptischer Kunst*, 152-3.

³ Little evidence is available for the Middle Kingdom. In G. H. Evers' new book on the sculpture of this period, *Staat aus dem Stein* (Munich, 1928), no examples of conjugal groups are to be found. There is one, however, as Mr. Engelbach has pointed out to me, of red stone, in the further right-hand case in Room 22 of the ground floor of the Cairo Museum.

⁴ The holding of hands, however, is occasionally shown in the earlier period, *e.g.*, Borchardt, *Catalogue gén.*, Cairo, *Statues*, I, 151 and Fechtmeier, *Plastik*, 28-9 (Berlin, 14108). In Cairo 107 the man, standing on the right of his wife, grasps her left elbow. It would appear, though I have not yet gone through the whole of the vast available material, that in drawing and relief work the old design of the wife embracing the man has persisted through the whole New Kingdom and even later.

THE SINAITIC INSCRIPTIONS

By A. E. COWLEY

In 1906 Sir Flinders Petrie published his *Researches in Sinai*, giving an account (on pp. 129 ff.) of some "inscriptions in unknown characters" found at Serâbit. These were studied by Dr. A. H. Gardiner when editing (with Professor Peet) the Egyptian inscriptions of Sinai. He came to the conclusion that a certain group of signs was to be read as **בעלת** and that the unknown writing was in an early form of the Semitic alphabet. This view was developed in an article on *The Egyptian Origin of the Semitic Alphabet* in *Journal*, III, 1 ff. After much pondering over the texts with Professor Sayce, I ventured to write an appendix to Gardiner's article in the same number of the *Journal*, 17 ff. By an accident this appeared with the title *The Origin of the Semitic Alphabet*. It was not at all intended to deal with that question, but was only an attempt to follow Gardiner's clue a little farther by identifying other signs and groups of signs. Since then much has been written by various scholars and great ingenuity has been expended on these sorry remnants, without any convincing solution of them. Popular interest however was aroused by the speculations of Professor H. Grimme, who claimed to find in the texts references to Moses.

When writing in 1916 I was painfully conscious that no real progress could be expected without more material, or at least better copies of the existing material. In 1927 Professors Lake and Blake, of Harvard, visited the site, photographed the inscriptions and found three new ones. All Petrie's fragments and one of the new inscriptions were removed to the Cairo museum. With the help of the fresh light thus obtained, Professor Butin wrote an excellent account of the whole problem up to date, summarizing the results of previous scholars, giving references to their publications and stating his own conclusions. (See the *Harvard Theological Review*, XXI [1928].)


At the Congress of Orientalists held in Oxford in 1928 Gardiner returned to the subject and read a paper which has since been published in the *P.E.F. Quarterly Statement*, Jan. 1929, 48 ff. He also exhibited some greatly enlarged (full-size?) photographs and careful copies, all of which he most generously left with me afterwards to be studied. As these give probably all the help we can hope to obtain from the existing monuments, I have studied them with the greatest care, and now offer my results, such as they are, partly in order to correct some of the suggestions in my previous article and partly to show the limits of what may be expected from the texts.



The starting-point of the whole decipherment is Gardiner's ingenious identification of **בעלת**, now generally accepted, *pace* H. Bauer (*Zur Entzifferung d. neuentdeckten Sinaischrift*, Halle a. S., 1918), who proposes wholly different values. The system of writing, it is agreed, is alphabetic, and we know four of the letters for certain. Any other identifications can only be accepted if the values give satisfactory words and a probable sense. We cannot however assume that this system contained signs corresponding exactly to the 22 letters of the "Phœnician" alphabet. It may have contained fewer—or more. The

improved copies show that some signs derived from the earlier copies are really not independent and hence some of the suggestions in my 1916 article (and those of others) must be rejected. It may also be the case that some of the difficult forms which still remain are due to the bad state of the originals or to defects in the copies. It is therefore useless to speculate as to a sign which occurs only in a place which is defaced or unverified. In the new copies there are 17 signs of which the form (I do not say the value) is certain, and perhaps 5 more which are uncertain for one reason or another. There can be little doubt that some of the 5 will turn out to be identical with some of the 17, so that probably all the 22 "Phœnician" letters are not represented in the present texts. On the other hand the monuments are so few, and the inscriptions on them so short, that further signs might well occur in any new inscriptions found.










As to the language: it is clearly not Egyptian, though several of the signs are good Egyptian characters. The word **בעלה** (our one solid piece of evidence) suggests that it is Semitic, and probably Canaanite. Petrie says (*Researches in Sinai*, 118 ff.) that the Egyptians employed the Aamu and people of Retennu to work their mines, and it seems likely that these monuments were erected by men of those Syrian tribes. They were inhabiting the South of Palestine and the North of the Sinai peninsula (Edom) at the time when the mines were worked, and the very practical Egyptian would not bring labour from a greater distance than was necessary. Local knowledge no doubt was also useful. Whether the date of the monuments is 1500 B.C. (as Petrie), or 1850 B.C. (as Sethe), we have no contemporary evidence as to the language of that region. We can only suppose that it is an early form of the language represented later by Phœnician in the North and Hebrew in the South, the earliest traces of which are to be found in the Tell el-'Amarnah glosses (c. 1400 B.C.). It would however be too much to expect that everything in the inscriptions should be explicable from our knowledge of the Hebrew of a thousand years later. Even in the periods we know best there is scarcely an inscription in Hebrew, Phœnician, or Aramaic which does not present difficulties, and this early dialect may have had special characteristics, e.g., an affinity with Arabic. Moreover, seeing that the method of writing, and even some of the actual signs, are derived from Egyptian, it would be strange if some Egyptian words were not also employed.

In general, the inscriptions are roughly cut, and give the impression of being the first efforts of a primitive people. They are for the most part badly broken and the fragments had apparently been thrown away among the rubbish of the mines. Butin is probably right in suggesting (at the end of his article) that they were discarded, and sometimes intentionally defaced, because they were not considered good enough. See further below.

The forms of the letters were probably invented at Serâbit, in the isolation of the desert, by an illiterate people living in close contact with Egyptians. These people saw the Egyptian inscriptions being carved and thought they could do the same. There can be no doubt that this Sinaitic system is modelled on Egyptian, though not borrowed from it. [E.g., in my first study in 1916 I began by assuming that  was Eg. N, but soon found that this led to no result.] It was therefore a highly intelligent imitation. That these intelligent illiterates invented the alphabetic principle is unlikely. It existed already to some extent in Egyptian beside the syllabic and ideographic principles. The "Sinaites" selected the alphabetic side of Egyptian writing (which was perhaps as much as they could understand) and applied it to their own (Semitic) language. Probably if they had been more literary, i.e., had been really familiar with Egyptian writing, they would have contrived something much more elaborate. The system they adopted was

(like that of the phonetic signs in Egyptian) consonantal and acrophonic, *i.e.*, each sign was a picture which stood for the first letter of its name. Some of the signs chosen were Egyptian in form, but the values attached to them, being derived from the Semitic names of the objects represented, were not the same as the Egyptian values. Thus  is no doubt copied from the Eg.  = *h*, but as it represents a house (Semitic *בית*) its value is *b*.

The values of the following 10 signs are now generally accepted, and are assumed here without discussion:

 ox(head) ארף = א;  house, בית = ב;  ox-goad, למר = ל;  water, מים = מ;  snake, נחש = נ;  eye, עין = ע;  head, ראש = ר;  tooth, שן = ש;  mark, תו = ת.

As to the contents of the inscriptions, I should like to emphasize again the view that they were written by a primitive people in an isolated condition. They are all short, most of them very short, as would be expected in first attempts at the new art of writing. They are not likely, judging from other similar monuments which we can read, to contain anything but the simplest, most straightforward statements. "A monument to Ba'alat", "In honour of Ba'alat because she showed favour," is as much as we can expect. They were strictly practical. The goddess had answered a prayer, and it was wise to give her credit for it, otherwise she would not do it again. To find much more than this is only to be led astray by imagination. Historical statements are not made in this concise form. They are introduced and elaborated with considerable circumstance, and this was evidently beyond the powers of our primitive Semites. Besides, engraving was difficult.

Who were these primitive Semites? No doubt the Egyptian government used local labour to work their turquoise mines. If we are right in reading נגב in the inscriptions (though even this is questioned) the labour must have come from the South of Palestine or from Edom²—which is in any case what we should expect. Now the early inhabitants of Edom, according to Gen. xxxvi, were the Horites, הרהר, who are described in ver. 21 as בני שעיר בארץ אדום. The form is similar to הרהי and הרהתי. They are never called בני הר, like the בני הת. The old explanation of their name was from חור *a hole*, hence *troglydytes*, as though they were a race of primitive savages. There is no evidence to support this. Recently it has been proposed to connect them with the Ḫarri or Ḫurri (Mitanni), who no doubt penetrated into Palestine at an early date. There is little evidence for this either. Egyptian records after the Twelfth Dynasty mention the Ḫ-r as equivalent to men of Retennu. If these are the Horites, they may have become known to the Egyptians through the expeditions to Sinai. Then the name might be derived from חור not in the sense of *troglydytes* but as *pit-men*, miners and inhabitants of the mining district. Perhaps however one may venture another explanation. They inhabited the region of Edom which with the South of Palestine was called ארץ הנגב, and if we rightly interpret the inscriptions they called themselves נגב. Why was the country called the Negeb? The old explanation again was from a root נגב meaning to be *dry*. But there is no

¹ The usual explanation *weapon* for this name is very unconvincing. I make the following suggestion with some hesitation. There is a late (Talmudic) word נאנא meaning *twigs, brushwood*. This looks like a popular collective reduplication (*cf.* מימי *water*) of an original נא of which the dual would be נאנא *two twigs*, eventually reduced to נאנא.

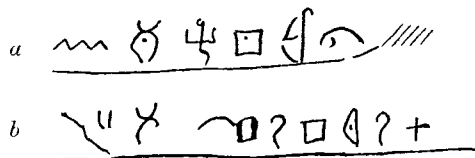
² *Cf.* the wonderful description of mining in the Edomite book of Job, xxviii. 1–11. The writer evidently knew what he was talking about.

evidence for such a root in Biblical Hebrew. It is found only in New Hebrew and late Aramaic. In Arabic (to which the language of Edom was locally near) the root **نَجَب** has a quite different meaning, and derivatives from it **نَجِيب** and **نَجَبَان** mean *noble, free-man*. I suggest that this is the meaning of **נִגְבָן** in the inscriptions, and that **הֶחֱרִי** is the Hebrew translation of it. It would be a very likely name for an independent race in a mountainous country to apply to themselves. (There may be a reminiscence of this, quite in the prophet's style, in Is. xxxiv. 12, **הֶחֱרִי** of Edom.) The name **נִגְבָן** was very old and was foreign to the Canaanites, so that by the time Genesis came to be written its meaning was forgotten and **אֶרֶץ הַנֶּגֶב** (נֶגֶב) the "land of the free-man" became a mere geographical term, the land of the Negeb (נֶגֶב). Still later when it had come to mean the dry country in the South of Palestine (and even South generally), a denominative verb was formed meaning to be dry. The Horites inhabited Edom from before the time of Chedorlaomer (Gen. xiv. 6) till they were conquered (exterminated?) by the Edomites (Deut. ii. 12-22), not in the time of Esau, but probably somewhere about 1200 B.C.

We must now consider the text of the inscriptions, taking them in order, as numbered by Gardiner¹.

No. 345 on the two sides of the base of a sphinx (now in the British Museum) consists of two separate phrases:

(a) On the right side, the first letter (reading from left to right, is **מ**, then a broken **ס**, then the sign which is taken by Butin, Sethe and others as **ה**, then **בַּע** and part of **ל**, after which the stone is broken. The whole therefore reads **מַא בַּעֵל * ל**.



No. 345

From a comparison of the other monuments there can be little doubt that the last word is to be completed as **בַּעֵל־לַת**. I cannot believe that the sign preceding it is **ה**, in spite of attractive comparisons. It is found only before **בַּעֵל־לַת**, whereas **ה** would surely have a more varied use, and it could not be the article in this connexion, because **בַּעֵל־לַת** is used as a proper name. Other explanations have been offered, and other readings proposed instead of **בַּעֵל־לַת**, but I think that reading is certain and I still hold to my original view that the preceding sign is a determinative of divinity. If this is so, **מַא** must be an independent word. I suggest that it has its primitive meaning "thing," hence "possession," unless it be a cult-word. We may read then **בַּעֵל־לַת** Det. **מַא** and translate "The possession of Ba'alat."

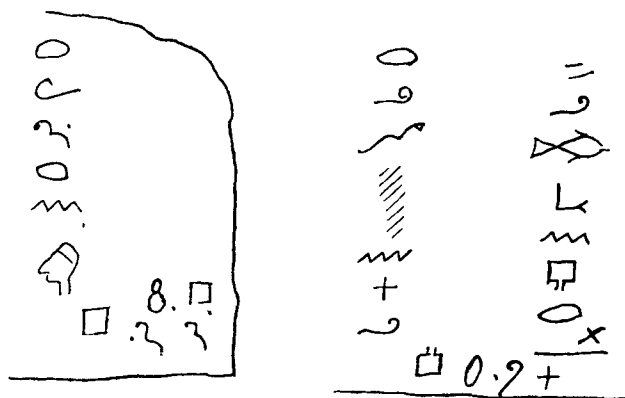
(b) On the left side, the last five signs (again reading from left to right) are **לַבַּעֵל־לַת** quite clearly. The beginning of the line is very difficult. The first letter seems to be a **נ** with two small strokes above it but not, apparently, belonging to it. This combination cannot be a **כ**, if we are right in identifying that letter elsewhere. The next sign seems to

¹ My drawings of the inscriptions have no independent value. They are compiled from all the sources available and represent what I think I see. They are inserted here merely to enable the reader to follow the discussion of the texts more easily.

be a pair of horns, but the rest of the ox-head (𐤏) is not visible on the original. The next sign, which is clear on the original and on the photograph, does not occur elsewhere. The side stroke can hardly be accidental, and the sign cannot be a 𐤁. I cannot at present suggest any probable reading. The line therefore is 𐤏*𐤏* 𐤁𐤏𐤏𐤏 " [dedicated?] to Ba'alat."

No. 346 is the best preserved and most intelligible of the inscriptions. It is a seated statuette with two columns of writing on the front, and another column on the right-hand side of the figure. Apparently nothing on the left-hand side.

Taking the front first, the inscription seems to begin with the left-hand column (as you face the figure), since it starts with the sign for 𐤓, as do 351 and 353. Then a 𐤌. The third character is the fish. I cannot understand why this has been taken as a matter of course for Samek and hence on the acrophonic principle as 𐤌. It is true that 𐤌 is the common word for *fish* in modern Arabic, but not, as far as I know, in any other Semitic language. It may have been used in very early Arabic, and our Horites may



No. 346


have spoken an Arabic dialect, but for the present they seem to be Canaanite. Fish is 𐤌 in Accadian and Aramaic, but the only word in Canaanite (Hebrew) is 𐤌, and the value of the sign should therefore be 𐤌. One can still recognize it in the earliest Phœnician form of the letter, but as the picture of a fish was no longer obvious, its name was changed.

The next sign, as shown on the large photograph, has its lower end clearly forked, like the hands of the determinative. I suggest that it is an imitation of the Egyptian 𐤓 representing an arm and hand, in Hebrew 𐤓, and that the value is 𐤓. (The dot which Butin sees beside it, seems to me doubtful.) The other characters are known, and the whole column reads 𐤓 𐤌 𐤓 𐤓. Vowels not being indicated, 𐤓 is for 𐤓 (or 𐤓) as in Phœnician, and similarly 𐤌 is for 𐤌. In 𐤓 on the other hand the 𐤓 is consonantal. 𐤓 is 3rd person fem. perf. of 𐤓. The column may be translated "This for the satisfaction of what she asked." It is not very good Hebrew, but it may have been early Canaanite. Perhaps 𐤓 really means the "thing" and the relative is omitted. The end of the column is marked off by a line.

In the left-hand column the first three signs are known (𐤓 𐤌 𐤓). There is then a gap,

owing to an injury to the stone. The remaining characters are known (מת לבעלת). In the gap there is just room for עם, and the whole would read על נעם אמת לבעלת. Eisler suggested אמת and translated "oracle" (as in Accadian). Butin is more probably right in taking it as "hand-maid" (Hebrew אמה). Hence the feminine בעת. As to the meaning of על נעם, which occurs in the 3rd column (on the side of the statuette) and elsewhere, I now feel no doubt. It may be compared with the expression על היי פ' in later (Nabataean, etc.) inscriptions, and must mean "for the prosperity of." The whole column may then be translated "For the prosperity of the servant (i.e., priestess) of Ba'alat," or "For the prosperity of the priestess. (Dedicated) to Ba'alat."

The end of the column is turned round and runs from left to right, as in no. 345. Elsewhere, in 349, the text reads from right to left. Evidently there was not as yet any fixed rule, except that the characters look in the direction of the writing, which is contrary to the rule observed in some other systems.

On the side of the statuette the text is complete and the first seven characters are known (על נעם רב). The remaining four are crowded together and we should be uncertain as to the order but for the fact that they occur elsewhere. They are taken by Butin as נצבן "the setters up," meaning, as he thinks, the stone-cutters or engravers, and the רב נצבן was their foreman. But the engravers can hardly have been sufficiently numerous to form a class, with an overseer important enough to be commemorated several times on these monuments. The men were there to work the mines, not to engrave monuments, which was only an incidental activity. Petrie (*Researches*, 116-17) says there were only three sculptors in one of the Egyptian expeditions. I therefore still hold (as in 1916) that the sign which Butin takes as צ is a ג. In shape (as it appears elsewhere) it is probably derived from the Egyptian , a bowl with a handle, in Hebrew גִּלְדָּה from which the value ג is taken. When at a later stage it had lost its resemblance to a bowl, it received another name (גמל) from a fancied likeness to the head and neck of a camel. The word is then נגבן. In 1916 I took this as נגב with the nunation. For reasons given above I now take it as a gentilic noun (plural in ג-), the Nagibin or Free-men, which is the same as the inhabitants of the region called after them later the Negeb. The רב נגבן is the Sheikh of the Nagibin, who was in charge of the miners from that district and a very important person. See also on no. 351.

The 3rd column then may be transliterated על נעם רב נגבן "For the prosperity of the chief of the Nagibin."

The purpose of the dots to which Butin calls attention in this inscription is not clear. There is a dot after על and another perhaps after נעם, which might be supposed to mark the end of those words. Of the others, one may mark the end of רב and another the end of נגבן, but there are also dots after ג and ג which cannot serve the same purpose. If they are really intentional, we can only say that their meaning is unknown. On other photographs dots appear frequently and I cannot feel sure when they are intentional. The ר here is a well drawn Syrian head with a long nose and pointed beard.

To produce a figure like this, plain and simple though it is, implies a higher degree of skill than the engraving of most of the monuments to be discussed below. The inscription was no doubt carved by the same skilled workman who produced the figure, and this accounts for the careful tracing of the signs, which may thus be taken as models.

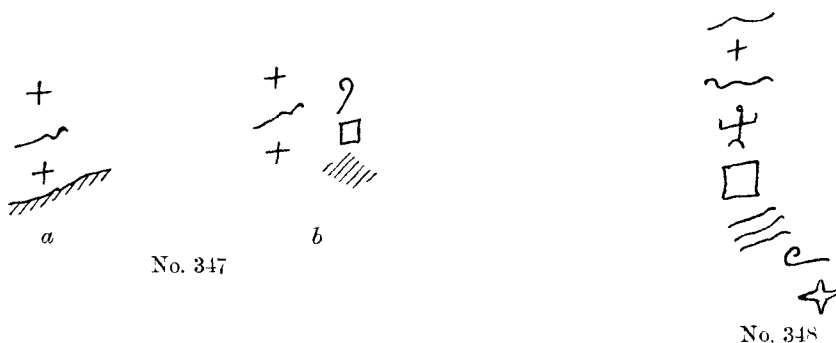
The whole inscription is to be read and translated as follows:

לִרְיָ מִבְּעַת col. 1.
עַל נְ[עַם] מַת לְבַעֲלַת col. 2.
עַל נְעַם רֵב נַגְבִּין col. 3.

“This for the satisfaction of what she asked, [is dedicated]
For the prosperity of the priestess of Ba‘alat,
(And) for the prosperity of the Chief of the Nagibin.”

No. 347 is a bust (in duplicate) with the inscription תַּנִּית clearly cut on the front. There is apparently no doubt about the characters (though the נ is not well made) and their value is known. In 1916 I explained them as the name Tanith, but this is clearly unsatisfactory. Gardiner tells me that on one of the two busts the letters לִב are faintly visible at the side of תַּנִּית, the rest being broken. It is also possible that the other bust is broken off short and that something was inscribed below תַּנִּית. We should then have to take תַּנִּית as “gift,” some form from $\sqrt{\text{נָתַן}}$: “a gift to B[a‘alat].”

No. 348. I have no photograph of this, and the early copies are evidently bad. Something may be lost at the beginning. Of what remains, the first and third signs are uncertain. The first may perhaps be a broken ט. The second is a clear ת. We might



No. 347

No. 348

therefore read שֵׁת, “set up,” either as a perfect, in which case a name or other subject is lost before it, or as a passive participle. This would require the next sign to be ל, which on the copy looks unlikely. Or the first word might be אַנֶּת. The rest is clear. The fourth sign is the determinative, which is followed by בַּעֲלַת. The ע is very badly copied, and the ת is unusual, but there can be no doubt about the group.

Until a better copy is available, we may provisionally read:

שֵׁת ל Det. בַּעֲלַת

“Set up to Ba‘alat.”

No. 349. This is the most extensive, but also the most difficult of the series owing to its broken condition. It has been read by Grimme as the chief support of his view.

Line 1 reads אַנְתוֹשׁ. I formerly took אַנ as = “I,” but this would make the name following begin with תוֹשׁ, which is impossible. Butin suggests that אַנֶּת is a cult-word: אַנֶּת “this offering” or something of the kind. This may be right, though I doubt his comparison of Bab. *unutu*, and there is nothing of the sort in Hebrew. Can it be Egyptian *in-t* \int $\frac{\text{~~~~~}}{\text{~~~~~}}$? The last sign in the line is defaced. We might read either שֵׁם or שֵׁת, followed by its subject in l. 2. There is hardly room for ׀, which is a long letter.

Line 2. רב נגבן מֶשׁ is clear, except for the last sign, about which however Butin expresses no doubt. If מֶשׁ is a name here as it seems to be elsewhere, we should expect it to come before its title. Whether it is the same as מִשֶּׁה, Moses, we cannot say. It does not at any rate denote the biblical Moses, who was much later.

Line 3. The third sign is clearly an open hand, which in Hebrew is not יד but כף. The first word therefore is עֶרֶךְ. Then a clear מ, then a small letter (ל?), a ב (or ר?), a ג, and one sign (or two) lost. If עֶרֶךְ can mean "as the value (or equivalent) of" and מ=מֶה as in 346, we want a verb after it like נָתַנו or נָדַרו, with the subject in the next line.

Line 4. Something is lost at the beginning. Then א fairly certain. This in Egyptian is ḥ (ח) and might be expected to have a different value in this system, but as it represents a twisted cord (חֲתָל in Semitic) it may well have the value ח. If so, it is probably the end of a word. The next four letters אַחֲנִי are clear. After them the photograph suggests a ג, and then the stone is broken, but there would be room for one large or two small letters. If אַח is "brother" (אֶחָ), then א represents (both ח and) ע. The "brethren" may well have been the name by which members of a gang of the Semitic miners called themselves. The combination suggests the reading אַח א[ח] "each brother," and I think I see traces of the horns of the first א, which is perhaps enough to fill the space. On the other hand אַחֲנִי may be the plural, in which case the preceding word must be something else ending in ח. What followed (?) אַחֲנִי I cannot guess. Butin's נֹר seems improbable.

Line 5 in the original copies was hopeless. The enlarged photograph makes עִשָּׂת fairly certain, and perhaps the remains of the missing letter may be the top of a head = ר, and the word will then be עִשְׂרֵת. The remains of about three signs complete the line. The first looks like the top of a head again = ר: the second is perhaps an upright ע, and the third is a fairly clear ג. The line therefore reads probably עִשְׂרֵת רֵעַן.

In ll. 6 and 7 according to Butin the first two signs are marked off by a vertical line. This does not appear in the large photograph.

Line 6. מֶשׁ is certain. Then א and, after a space, probably ת. Then a break in the stone. The completion can hardly be anything but א[ח]ת[ו], as in l. 1.

Line 7. עִשָּׂה=[ע]ש, followed by לָב very indistinct, but probable.

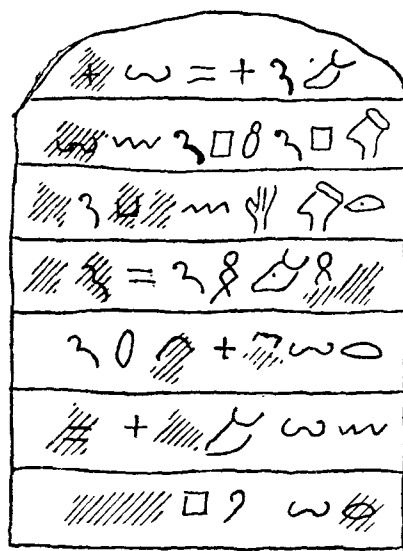
The whole inscription may then be transcribed as follows:

- | | |
|--|---|
| אֶת זֶשׁ[ת] | 1 |
| רַב נִגְבָּן מֶשׁ | 2 |
| עֶרֶךְ מ [שְׁנָתָנוּ or נָדָרוּ or the like] | 3 |
| א[ח]ת אַח נֹנְנ(?)* | 4 |
| עִשְׂרֵת רֵעַן | 5 |
| מֶשׁ א[ח]ת[ו] | 6 |
| ע[ש] לָב[עֵלָת] | 7 |

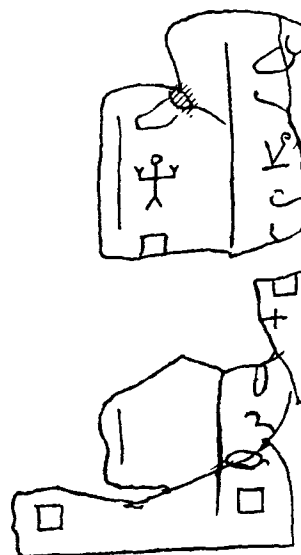
"This monument (was) erected (by)
the Chief of the Nagibin, Mš,
in payment of what [they vowed?]
each brother...
ten companions (in all).
Mš [this] mon[um]ent
made to Ba[‘alat]."

No. 350 is broken into several pieces, of which some are lost. Even admitting that all the remaining fragments belong to the same inscription, it is still uncertain how many signs are missing.

Col. 1 (right-hand). The first sign is fairly certainly \aleph . The second is taken by Butin as \beth , but the direction of the line suggests rather a badly made \beth , or it may be some sign not otherwise known. The third sign is indistinct. If it could be \aleph , we should have $\aleph\aleph$, as elsewhere, but I agree with Butin that it looks more like the fifth sign in 352, which is probably \beth , or again it may be a new character. The fourth sign is said by Butin (who saw the original) to be certainly ψ . A fragment of the stone, which contained the right-hand end of the sign, was lost before the large photograph was taken. What is left, I confess, looks more like part of \beth than of ψ . Of the fifth sign only a single stroke remains. This is distinctly curved towards the right. It is therefore not part of the sign which I take as \aleph (Butin \beth), but is probably the horn of an \aleph , which would just fill the



No. 349



No. 350

space if the fragments are in correct position. The sixth sign is a broken \beth . If $\aleph\aleph$ in 349 means a member of a gang of miners, $\aleph\aleph$ "father" may well have been the title of the foreman. The seventh sign is clearly \aleph . Then there is a break in the stone and the remains of a sign which may (?) be ψ (as Butin). Possibly there was something between it and \aleph . I suggest $\psi\aleph$. Then $\aleph\aleph$ quite clearly. The \beth here is a very fair imitation of Eg. ψ .

Col. 2 is lost except for two signs, \aleph and the determinative at the top, and traces of a \beth . There is room for a sign above the \aleph , so that the column is no doubt to be restored as in 345 and elsewhere.

Col. 3 lost except for a doubtful \beth at the foot.

The inscription then may perhaps be read:

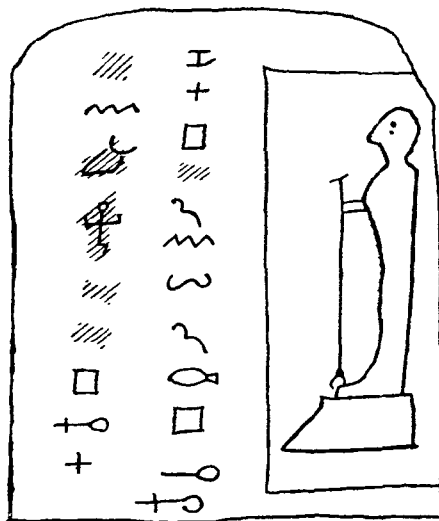
$\aleph\aleph\aleph\aleph\aleph\aleph\aleph\aleph\aleph\aleph$ col. 1.

$\aleph\aleph\aleph\aleph\aleph\aleph\aleph\aleph\aleph\aleph$ Det. \aleph col. 2.

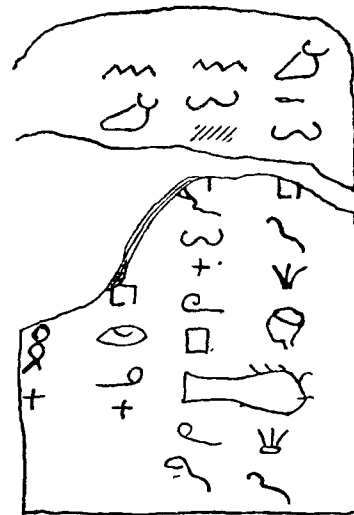
"I am Kš, foreman of nine (miners), the Nagib (or of 9 Nagibin).
The possession of Ba'alat."

This result is not put forward with any great confidence, because of the broken condition of the stone. Objection has been made to taking (')אנ as "I" on the ground that an inscription would only begin so if it were connected with a statue. That is by no means the case. The Moabite inscription of Mesha was not attached to a statue, nor were the graffiti of Abydos (*C.I.S.*, I, 102), nor the Aramaic inscription of Cilicia. As to the expression "foreman of nine," cf. the "ten companions" in 349, and the numeral 9 in 357. Petrie (*Researches*, 113, 116, 120) states that the foremen were organized in gangs of ten, of whom one was in command, and each had three or four labourers under him. The אב חשע would be the head of such a gang, while the רב נגבן was head of the whole Semitic contingent.

No. 351 is a stele with a figure of Ptah, on the same slab as 353. Butin suggests that these two inscriptions were rejected (probably as being incorrect) and were therefore not separated. If that is so, some of the difficulties may be due to errors on the part of the unskilled engraver. See further on 353.



No. 351



No. 352

The inscription begins no doubt with the right-hand column.

Col. 1. The first two signs are clearly זת, which I take as "this" fem. The third sign is a ב and then there is a break in the stone. Butin says that no letter seems to have been inscribed on the broken space. It is difficult to accept this, especially as there is a distinct mark which might be part of a ש. However nothing can be read with certainty. Assuming the inscription to be an unsuccessful attempt, this may be one of the defects which led to its rejection. The workman cut a sign after ב, found he had made a mistake and chiselled it out, leaving the surface broken. We should then disregard the blank space. The signs which follow are quite clearly נב ש נב irregularly spaced so. It looks as though the space had been badly calculated and the letters had been spread out to fill it. Reading זתבנמשנב continuously the only way of dividing the words would seem to be זת בנ מש נב. Then בנ is for בנה ("built," "erected") and מש, its subject, is a name. There are two signs at the foot of the column, separated from the rest by additional space. They can hardly belong to נב, but must begin a new clause. Neither of the two

has been found in the previous inscriptions. They therefore represent some of the letters not yet accounted for. I suggest that they are $\text{וה}=\text{והיא}$ fem. as ות above.

Col. 2 is badly defaced. There is probably, judging from the large photograph, nothing before נ (*pace* Butin). The נ is clear. Then an א is probable, though only one of the horns is visible. Then there are faint traces of the determinative of divinity. In the space which follows there is room for about two signs, entirely lost. The remains of the next sign have been variously read as ש , ע and (most probably) ב . Then follows a sign which appears to be the same as the last sign (ה) in Col. 1, or possibly the last but one (ו). Finally a ת quite clearly. Butin reads the end as בעלת , but ל is impossible. It should point the other way: and the preceding letter can hardly be ע . Moreover since the monument bears a picture of Ptah, it is unlikely to be dedicated to Ba'alat. The most likely reading of the last three signs is ברת . Can this be meant for the Eg. *bît* "the mining country" (𓆎𓅓𓏏𓏂)? It is not a scientific transliteration, but it may have been an approximation to the sound of the word as the illiterate Semites heard it. In that case the ה was perhaps a sort of hamza. The missing letters can then hardly be anything but אל following the determinative 𓆎 . Is אל ברת a fitting title for Ptah?

I suggest the following transliteration:

ות בנ מִש נגב וה col. 1.

מה [אל] ברת Det. col. 2.

and translate:

"This (was) erected (by) Mš the Nagib, and it is
a possession of the god of the mining-land."

No. 352. Butin has some good suggestions as to this inscription.

Col. 1. The first sign א is clear. There seems to be a trace of a sign after it which Butin thinks is only a false start by the engraver, and may be neglected. If so, and if we are right in placing the fragments close together, the beginning reads אשבנ quite clearly. The ב is broken, but can hardly be anything else. It is open at the right-hand bottom corner as in col. 3. The fifth sign I take to be a simplified form of the hand in 349, therefore כ (so Butin). *Cf.* the כ in the Aḥiram inscription, where the lines have become straight. The sixth sign is a badly made ר . The seventh is the fish, which I take to be ד (see on 349). The eighth sign on the large photograph is clearly the same as the fifth, *i.e.*, כ . Finally a נ not very distinct. The column then reads אש בנ כר דכנ . I take אש for the relative, as in Phoenician. The verb $\text{בנ}=\text{בנה}$ is followed by its subject כר which must be a name. *Cf.* כרן in Gen. xxxvi. 26, one of the "sons" of Seir in the land of Edom. The large number of names in that genealogy ending in ן suggests that the termination is merely formative and could be omitted. *Cf.* יתרן with יתרו and יתר ; לומן with לום . The next word דכנ must be a title. Butin reads it as דכנ , which would be excellent if the fish were ד , but I cannot believe that it is. I have no explanation to offer. Possibly the value כ is wrong.

Col. 2. מש is fairly clear. Then the surface is broken, and there is room for two or even three signs. On the lower fragment the first sign seems to have an unusual form, but I think it is really נ with the tail straight owing to lack of space. A stroke from the letter above (ת ?) is visible, and, as the stone has broken away, the head of the נ looks like an oval. Then follow ש clearly and ת which has been put in as an afterthought, the

signs being crowded. Next comes לב clearly, shut in by the tail of the fish, and below are two signs which Butin takes as נן. In the small photograph they might indeed be so read, but in the large photograph they seem to be differentiated. I have looked at them a great deal and am inclined, with some hesitation, to read them as לן. The ך is certain. The letters are then לן נשת לב לן מש ** ת, and the gap must have contained something like [נע]. The verb נשת is for נשאת (third fem.), and the phrase "she lifted up the heart for us" (*i.e.*, our heart) would mean "encouraged us," "gave us cause for rejoicing." Cf. 353, col. 3. In the Egyptian accounts of the mining mention is often made of the anxiety of the officials owing to the difficulty of finding the turquoise.

Col. 3. מ is certain and there are traces of נ. Then part of the stone is lost. On the lower fragment בעלת is certain, though the ל is badly formed and should point the other way, as in col. 2. The lost fragment must have contained the determinative, which is usual before בעלת, and the whole column is the same as in 345, right.

Col. 4. Apparently nothing on the upper fragment. On the lower piece the last sign is a clear ת. Before it there is a broken sign which Butin takes for ל and so restores בעלת. It is unlikely that this word should occur twice in the inscription. As a matter of fact the remnants are the lower part of ת, as in 353, col. 2. I suggest that the word is to be restored as נהת, "rest" or "peace," and that something like "may she grant" or "the giver of" is to be supplied before it. Or perhaps it is מנהת as in 354. The whole may then be read:

אש בנ כר רכן	col. 1.
מש [נע]ת נשת לב לן	col. 2.
מא Det. בעלת	col. 3.
נ[הת] . . .	col. 4.

[“This is] what K-r erected, officer of
Mš, [when] she lifted up our heart.
A possession of Ba‘alat,
[giver of r]est.”

No. 353. This was on the same stone as 351.

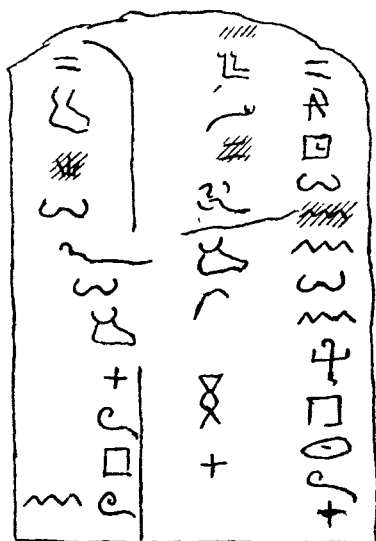
Col. 1 begins as 351, נת ב. (The ת has some additional strokes which are accidental.) Then the surface is defaced. The subsequent signs, though much weathered, are certain. In the gap there is room for perhaps two signs, of which the first, Butin thinks after examining the original, is ש. He proposes to restore [ם]ש. Then follows the name מש. Then a מ is clear on the large photograph (not נ as Butin). I suppose it is for מא, as elsewhere, since it is followed by the determinative and בעלת.

Col. 2 is very much defaced, Butin says purposely, with a chisel. The sign like a beetle, shown in the early copies at the top, is probably nothing (so Butin), though there are certainly marks. Then a sign not found elsewhere, the value of which I cannot guess. Then apparently נ and ך, very doubtful, followed by a combination of marks of which I can make nothing. After a crack in the stone the large photograph shows fairly clearly an נ. Then a defaced space (2? signs missing) followed by הת clearly. The last word may be נהת (*cf.* 352), and the whole column no doubt meant "because she gave rest" or something of the kind, but it is all so uncertain that it is better not to

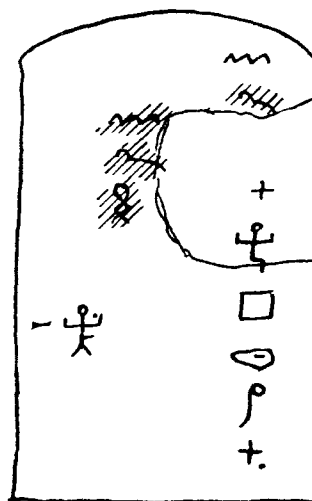
guess at the reading. There can be no doubt that the inscription has been rejected as unsatisfactory and intentionally defaced.

Col. 3 confirms this. The other two columns, owing to defective spacing or to some other mistake, had failed to fill up the whole slab. When these were condemned, the workman thought he would use the rest of the prepared surface for practice. We should therefore not expect col. 3 necessarily to have any relation to cols. 1 and 2, but to contain some of the formulae which commonly recur in these inscriptions. It looks indeed as though it might be a repetition, and correction of col. 2.

The first sign is clearly י. The next, which has been taken as a new character (as in col. 2), is really only an נ very badly formed by the inexperienced workman. The third sign is perhaps כ badly made or broken. Then ו clearly. The fifth sign I at first took for מ, but it is a badly formed נ which goes wriggling away over the boundary line into col. 2. It looks as though the engraver had started to make a מ and then altered it into a נ. The sixth sign is ש, fairly clear, rather too much to the right. The seventh sign is



No. 353



No. 354

נ, indistinct, badly formed and again too far to the right. Then a ת, clear but rather small, followed by ל ל, all quite clear. There was not room for the final letter, which has accordingly been put at the left of the last ל. It has been taken as כ (of the Phœnician form) and otherwise, but the large photograph shows a clear כ, clumsily made and confused by unrelated marks.

The column was evidently engraved by an unskilful workman: the signs are ill-formed and the alignment faulty. It is incomplete, since no dedication is mentioned, and it can hardly belong to cols. 1 and 2. When he had finished the column the workman started to cut the boundary line, which curves to the left at the top as though it marked off another stele, but he stopped half-way down because he would have cut into some of the signs. It was therefore not a serious monument and that is why it was heaved over among the rubbish. The same argument no doubt accounts for some of the difficulties of 351 (on the same stone) and of others of these inscriptions.

So far as it can be read, the inscription is as follows:

זֹת בַּשְׁמֵם [מֵשׁ מ] Det. בַּעֲלָת col. 1.

נִנְא [נ]חַת col. 2.

זֹא כִשְׁנִשְׂאָת לִב לֵם col. 3.

“This in the name of Mš, a possession of Ba‘alat,
[because she gave?] rest.
This when she lifted up the heart of them.”

The phrase in col. 3 is the same as in 352 col. 2, but here the נ is written. In 352 there is, according to Butin, a dot beside the ת.

No. 354. Much broken, and a large fragment lost.

Col. 1 begins with מ quite clear. Then probably נ. Other marks by the side of it must be unintentional, since they form no known sign and are not in the line of the column. There is then a gap owing to the loss of a fragment. Butin apparently saw this fragment, and states that it contained the letter ת followed by ה or ה (𐤅 which I call the determinative). On the lower fragment the foot of the determinative is visible, and בַּעֲלָת is clear. The whole can hardly have been anything but בַּעֲלָת Det. מנ[ח]ת, or possibly with a ל between ת and the determinative.

In col. 2 there seem to be remains of a מ near the top, and a נ following, both ending on the right-hand fragment. Then perhaps a partly cut ח intentionally defaced, and room for ל ת (which seem not to have been carved) before the determinative, which is clear—unless it be a ת. This column therefore seems to have been intended to contain the same text as col. 1. One is a repetition of the other, not a continuation, since it is unlikely that the determinative would occur twice in so short an inscription. I suggest that the whole is the work of an apprentice. He first carved col. 1, leaving space for the continuation in col. 2. Then he, or his superior, was dissatisfied with the work and it was rejected. The apprentice however thought good to try again on the prepared surface left blank. He carved part of the same text again, but found that he had got the determinative too low, so that not enough space was left for בַּעֲלָת. He therefore gave up his attempt without finishing the column, and the slab was broken up. The unskilfulness of the work is evident in col. 1, for it begins with a large מ and ends with letters on a much smaller scale. Here also the space was miscalculated, so that the end is crowded, and the letters are not well formed.

We may read:

מנ[ח]ת [ל?] Det. בַּעֲלָת 1

מנח[ת ל] Det. 2

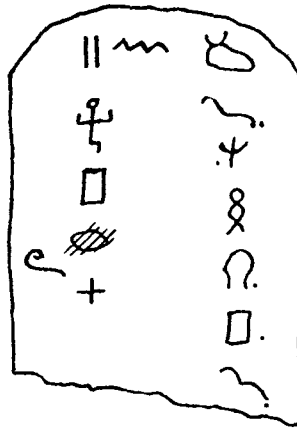
“An offering to Ba‘alat.”

No. 355 is too fragmentary to yield any results. No large photograph is available.

No. 356 (like 357 and 358) was found by the Harvard expedition in 1927. Though the stone is broken at the bottom, the inscription is apparently complete. Butin sees a dot with nearly every sign. If he is right, the purpose of them is not clear, but the photograph is rather indistinct, and one cannot be certain about the dots.

Col. 1. The first sign is almost certainly **א**, although in that case it faces the wrong way. Then **נ** probably, and the sign which was taken as **ב** in 352. It has a dot at the side. Then the upper part apparently of a **ה**, the lower part being effaced. Then a much injured **ר**, a **ב** of oblong form, and finally the remains of a **נ**.

Col. 2. At the top two vertical strokes, probably **י** (as Butin) and a **מ** (for **מא**). The marks following are read by Butin as **ל**, but from the large photograph they seem almost certainly to be the determinative. Then **ב**, injured, again oblong. Then remains of **ע**, with **ל** at the side, and finally **ת**. This inscription also is badly carved, and was perhaps rejected for that reason. Judging from the other texts, one may assume that nothing is lost after **בעלת**, where the stone is broken off. At the end of col. 1 however something may be lost, as the slab in its present condition is shorter than usual in comparison to its breadth. We might perhaps read **רַב־נַגְבִּין** instead of **רַב־נ**.



No. 356

The whole may be read with some assurance:

אנ כה רב נגבין col. 1.

ת בעלת Det. **מ י** col. 2.

"I am K_h, chief of the Nagibin.

This is a possession of Ba'alat."

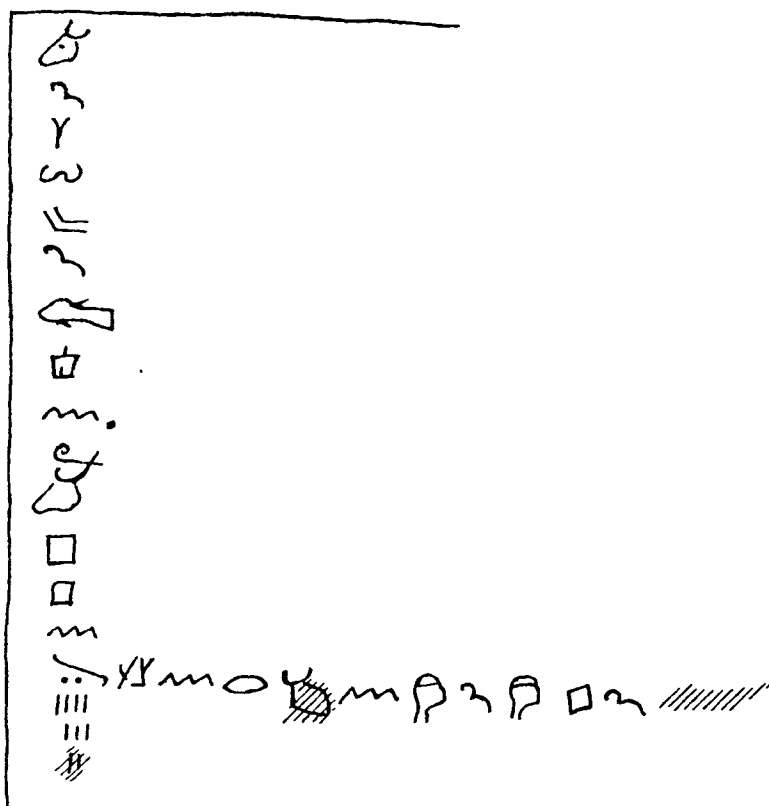
No. 357 is *in situ* on a wall where the Harvard expedition found difficulty in obtaining a photograph. Only a small, rather faint photograph is available, and that omits the first four signs. I am therefore largely dependent on Butin's published copy.

The inscription consists of a vertical column on the left-hand side, and a horizontal line at right angles to it, on the lower side. Whether the central space ever contained any pictorial engraving, I have no information. It would seem likely.

According to Butin **אנ** are clear at the beginning. Then a forked sign which is new, if it is correct. Butin expresses no doubt about it and takes it as **נ**. It may be a variety of the sign which I took as **י** in 351, here standing upright and with the top open. But it is hardly worth while to speculate much about this inscription until we have a more satisfactory photograph. Then Butin reads a **ש**. The next sign, with which the photograph begins, is new. It is confused by a number of marks which may be accidental. I can only suggest, without any confidence, that it is somehow a misformed **ב**. Then

Butin reads a ג , not visible on the photograph. Then the fish = ד . Then Butin gives a sign not visible on the photograph. This is again a new sign, if correct, but it may be only a small ב . The next signs מלאב (the לא is not a ligature) are all fairly clear, then a doubtful ב and a clear מ . Then Butin reads a ג , not visible on the photograph, and below it nine strokes, evidently a numeral.

The text then continues in a horizontal line along the base of the prepared surface. Butin reads this from right to left, but it is quite inconceivable that the engraver should have begun again on the right, and the line is certainly to be read from left to right as a continuation of the column. Cf. 346 where the columns turn round in the same way, and 349 where the lines read indeed from right to left, but in the direction in which the faces look.



No. 357

The first sign in the horizontal line, if correct, is new, and I cannot guess at its value. The next two signs are מע . Then a sign which Butin takes to be ג . But it is almost certainly the horns of an א , the head being effaced. Then follow מרנר , all visible on the photograph. The next sign, which Butin makes a ל , is really only a ב rather tilted up, and the supposed tail is only a break in the stone. Then a probable ג , after which the stone is broken, so that we cannot tell whether anything followed.

The inscription therefore seems to read as follows:

אנוש*נדרבמלאבבמנ
 מעמרנרבנ

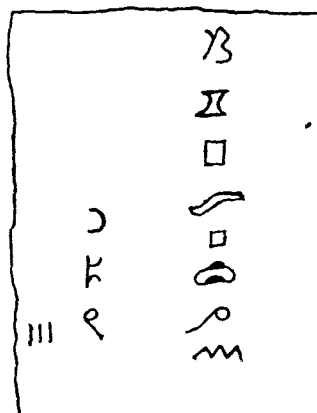
Since the end is broken, it is possible that we should read רב נגבן, as elsewhere. The preceding word must be אמרן, for the signs can hardly be divided otherwise. Then the first three signs of the horizontal line must form a word, for מע alone is impossible and the א cannot belong to it. The association with אמרן suggests שמע, and in fact the only two other possible words (קמע and דמע) are quite unsuitable. Is it possible that the first sign may be a ש standing upright confused by lines which do not belong to it? The numerals must belong to the vertical column, and a plural is required before them. Butin's ך is therefore probable, although after looking at the photograph I cannot feel sure that he has not been misled by what is really a crack in the stone. Also there seem to be two dots which I do not understand. In any case, if we read ך, I should take it as the plural termination and not as Butin [במנה]. Going backwards, the further division of the signs in the column is very difficult owing to the uncertainty of some of them. From the marks visible on the photograph I should prefer not to read a ב before מן, but I cannot suggest anything better. Before it לאב seems a probable combination, the "father"

being the head of a gang of 10, as above in 350. Then דבם might be a name, though rather an unlikely one. On the other hand, if ב is right, the combination נרב is attractive, but it is difficult to fit in with the rest. As to the first four signs, I cannot believe that they are to be taken as אניש (with Butin), and I would suggest (if his ך is right) that the first word is אנו, a demonstrative as Acc. *annû*.

The inscription is skilfully engraved, some of the characters being, one might almost say, beautifully carved, and it is practically (if not actually) complete. With a good photograph or copy one ought to be able to make out the whole of it. Until that is available, no explanation of the text can be convincing. I suggest the following provisional reading with great diffidence:

אנו שבנ דבם לאב *מן
שמע אמרן רב נגבן

"This is what D-b-m set up for the father of 9 [miners?]
(when) the Chief of the Nagibin heard our petition."



No. 358

No. 358 is on the rock-wall inside mine M. It was discovered by the Harvard expedition, but its position made photographing impossible. Even a copy was only made with

difficulty. Any attempt at decipherment would be mere guess-work, and is better deferred for the present.

Col. 1. The first two signs are unrecognizable. The third is a ב. The fourth is unrecognizable. Then בעלם, which perhaps should be בעלת.

Col. 2. Two signs unrecognizable. Then a ל, but pointing in a direction different from that of ל in col. 1. I suspect that it is really a ך, since at the side of it there are three strokes, no doubt a numeral.

So far as anything can be read, it is as follows:

בעלם * ב * * col. 1.

ל * * col. 2.

which may perhaps be really:

אנת לבעלת
אהן

Dr. Gardiner has recently shown me photographs of two more fragments, which may provisionally be numbered 359 and 360, unless they belong to one and the same inscription. They are too imperfect to discuss.

No. 359, parts of two columns, reads:

ל? col. 1.

א? מלעזר col. 2.

No. 360, part of one column, reads:








לאבמ

The above results are put forward without any pretence that the readings are final or the translations certain. The object has simply been to show what is the most that can be obtained from the existing material, and it is recognized that new inscriptions (which will undoubtedly be found) may modify some of the conclusions. I venture to hope however that the readings are probable and the translations not extravagant. I have tried to satisfy at least myself what signs are certain and what are doubtful, and it is some satisfaction to find that where the reading is clear, the translation is not more difficult than would be expected in the earliest specimens of a West-Semitic dialect. One important point which emerges from the present study is that the number of signs is smaller than has been supposed. So far 17 signs have been identified as corresponding, more or less certainly, to letters of the Phœnician alphabet. The five letters for which no corresponding signs have been found are ט, ס, פ, צ, ק. On the other hand there are four or perhaps five signs (all for one reason or another uncertain) whose values have not been identified. These may complete the alphabet, but, as I said above, we have no reason to expect that there were exactly 22 signs, neither more nor less.

It would be premature to argue about the relation of this system of writing to the Phœnician alphabet. A few observations may however perhaps be allowed. It seems clear that the system was alphabetic, consonantal and acrophonic. It was also used, and no doubt invented by Semites. There is no reason to assume that these Semites were brought from Egypt and had invented it there (as C. F. Jean in *Syria*, ix, 1928, 278 ff.). On the contrary there is great probability that they were natives of the North of the

Sinai peninsula (the later Edom), who were employed by the Egyptians to work the mines. They saw there Egyptian inscriptions being carved, they enquired into the strange art of writing, were told of the principle of acrophony, and applied it to their own language. It was natural that their first attempts should be rough, short and primitive. It was also natural that they should adopt Egyptian signs for their alphabet, while giving them values derived from the corresponding words in their own language. This view differs widely from that of de Rougé who attempted to derive the Phœnician letters from signs having the same values in Egyptian.

The system was then invented in Sinai on an Egyptian model. How it spread northward (and southward?) we shall probably never know, but it is evident that the miners might easily convey it to southern Palestine, with which they were closely connected. The earliest alphabetic writing hitherto found in the North (Byblos, Samaria, Moab) is some centuries later. During the interval it had passed out of the primitive and purely monumental stages, had come into popular use, and the forms of the letters had been simplified for writing on papyrus or parchment. (This is commonly accepted as explaining the flowing curves of *e.g.* the Mesha inscription.) One can imagine how readily it would commend itself to people who had hitherto known only the intricate methods of cuneiform and perhaps Egyptian writing.

In becoming simpler and more conventional some signs lost their resemblance to the original pictures, and then received other names more easy to connect with the new forms. Thus  = גלה = ג, when reduced to  was called גמל from a fancied resemblance to a camel's head and neck:  = דג = ד, when reduced to  was called דלת. Again, when passing under Aramaic influence  = נהש = נ became נון = fish. Also at some time before reaching the Greeks  = זאין = two twigs(?) became  ζῆτα (זית) = an olive tree. In fact when once the alphabet was established there was nothing essential about the names of the several letters. They were just convenient ways of referring to the signs, and might be altered to suit circumstances, very much as they are in modern European languages. Even to Semites few of them, in later times, can have appeared to describe the shapes of the letters, while to the Greeks they must always have been mere labels.

GREEK MAGICAL PAPYRI¹

BY A. D. NOCK

§ 1. This title covers a group of documents differing widely in length and not a little in character, but possessing a substantive uniformity. Some of them are brief recipes for magical processes or exorcisms, others are collections of such recipes together with more ambitious invocations and methods of securing control over supernatural forces. Many of these papyri were edited in a collective form by Wessely in 1888 and 1893, a pioneer work which has rendered great service to study; the London texts were republished with an addition by Sir Frederic Kenyon, and the Oslo texts were produced by Eitrem four years ago with an English translation and an excellent commentary. We have now from Preisendanz the first volume of an edition which bids fair to be the standard for many years². In the nature of things it cannot be definitive; but it represents a very real advance, and it should enable much more study to be devoted to these texts than has been hitherto given to them. Dieterich, to whom the idea of this Corpus is due, his friend Wunsch, who carried on his work, and Reitzenstein, who is happily still with us and still active, have taught us how important they are for a proper understanding of the religious history of the Empire. The new Corpus, with its translation facing the Greek and its brief but valuable notes, Eitrem's commentary, and Th. Hopfner's admirable and exhaustive *Griechisch-Ägyptische Offenbarungszauber*³ should make the papyri much more accessible. May the new Corpus receive such financial support as will ensure its speedy completion!

§ 2. Some of the short texts giving single recipes are on palaeographical grounds placed as early as the second century of our era⁴: the substantial magical books fall on the same grounds between the late third and the fifth, and the presence in them not merely of Coptic passages but of at least one misunderstanding of a Coptic word⁵ confirms this date. We know of an extensive destruction of magical books and persecution of their possessors under Diocletian, but such action is seldom completely successful: it might be thought

¹ The substance of this paper was read to the Hellenic Society on May 7, 1929. I am indebted to Mr. H. I. Bell, Dr. A. B. Cook and Mr. G. W. Dyson for valuable suggestions.

² *Papyri graecae magicae*, Die griechischen Zauberpapyri herausgegeben und übersetzt von Karl Preisendanz unter Mitarbeit von A. Abt, S. Eitrem, L. Fahz, A. Jacoby, G. Möller, R. Wunsch, 1, pp. xii + 200 with 3 plates, 1928, Teubner, Leipzig. 18 M.

³ Vols. XXI and XXII of Wessely's *Studien*, here called I and II: a convenient survey by H. in *Pauly-Wissowa*, XIV, 301 ff.

⁴ A. S. Hunt's cryptogram (*Proc. Brit. Ac.*, xv) is strengthened at the back with a strip from a document of Hadrianic date: it is quite in the style of our later texts. Kenyon dates P. Lond. 46 (Preis. vi) in the second century A.D.: a Latin tablet from Hadrumetum assigned to the end of the same century (Audollent, *Defixionum tabellae*, 370, no. 270) is of this type. From the third century we have the love charm discussed, later, pp. 221-2, Preisigke, *Sammelbuch*, 4947, and a Graeco-Demotic collection contained in Pap. Eg. Dept. 10588 [late third century] shortly to appear in *Journal* edited by H. I. Bell, H. J. M. Milne, H. Thompson, and the writer; the latter is a genuine magical book.

The love charms edited by Boll, *Sitzungsber. Heidelb. Akad.*, 1910, II, and assigned by him to the 1st century are of a simpler type.

⁵ Preisendanz on v, 75.

that this is reflected in the stringent instructions to secrecy, but they are natural in magic, and a magic recipe in cryptogram form brilliantly deciphered by A. S. Hunt is probably of Hadrianic date.

It is remarkable that we find in this period all these substantial works, running to the 3274 lines of the great Paris book, on good papyrus, some of them provided with elaborate drawings as models. I think we must regard them as the actual working copies of practical magicians, like the books burnt by St. Paul's Ephesian converts and possessed of a considerable monetary value, or a later magical MS at Athens which bears wax-drippings, perhaps from the candles used in ceremonies¹, or the magical books handed down in Germany from generation to generation². A man who wanted a love spell might apply to the possessor of such a book for a suitable text to inscribe on a lead tablet and put in the mouth of a mummy or for a rite to follow. This view of these papyri is confirmed by the fact that it is probable that many of them belong to a single library³. We have probably a magician's collection. And it is noteworthy that the actual lead tablets, based no doubt on similar magical books, tend to occur in groups together: most of the so-called Sethianic curse tablets in Rome were written by one hand. In this case the magician or his assistant clearly copied the actual text for use⁴.

Working copies have a history which is quite different from that of ordinary literature. In literature the form is essential; one may insert glosses, and one makes errors of transcription, but one seeks to preserve its shape. A working copy has to be useful, and so one modifies it and incorporates suggestions from other sources⁵. So much we might conjecture, and in fact there is abundant evidence of these proceedings in our texts⁶. Thus we read in IV, 2427 τὸ ὄνομα τοῦ Ἀγαθοῦ Δαίμονος ὃ ἐστὶν ὡς λέγει Ἐπαφρόδιτος τὸ ὑποκείμενον φρη ανωι φωρχω φυυυ ρορψις οροχωωι, ὡς δὲ ἐν τῷ χάρτη, ᾧ εὔρον, μετεβλήθη τὸ πραγματικόν⁷, οὕτως. Ἀρπονκνουφι λόγος. Again, in V, 364 the name to be used is given, and then we read ὡς δὲ ἐν τῷ αὐθεντικῷ εὑρέθη τὰ ὀνόματα and another follows, and a little later (V, 372) a variant is given as having been heard from a man of Heracleopolis. Varieties of method and of sacred names, and what we should call variant readings (quoted just as in scholia on classical authors)⁸, occur frequently: a spell is followed by another copy, ἄλλη ἀντιγραφὴ (III, 483), and again another (489), an amulet by another

¹ A. Delatte, *Anecdota Atheniensia*, I, 2.

² A. Jacoby, in the new *Handwörterbuch des deutschen Aberglaubens* (ed. Hoffmann-Krayer and Bächtold-Stäubli), I, 1512 f.; H. Bächtold-Stäubli, *ibid.*, 1688. On such a used copy, cf. A. Dieterich, *Kleine Schriften*, 196 ff.; for ancient references to magic books, *ibid.*, 3 f.; evidence of editing of incantations in L. W. King, *Babylonian Magic and Sorcery*, xiii ff.

³ Preisendanz, I, p. 21.

⁴ R. Wünsch, *Sethianische Verfluchungstafeln*, 75 ff.; Audollent, *op. cit.*, xlv, cvi.

⁵ Cf. the complex textual history of the cookery book of Apicius (S. Brandt, *Philol.*, Supp., XIX, iii); also that of the *Apophthegmata Patrum*, a work coming from an unliterary stratum of society (Bousset, *Apophthegmata*, 76 ff.).

⁶ Dieterich, 3 ff. (suggested *ibid.* but I doubt the first stage of single recipes p. 11).

⁷ The effective name, a short form as Preisendanz notes of that given, I, 27; also *P. Oslo*, I, 219, with Eitrem's note. Elaborate variant invocations in *P. Leid*, W xxi, 20 ff. (Dieterich, *Abrahas*, 202).

⁸ Varieties of method, II, 43 βάλε εἰς ὑποκάστραν βαλανείου· ἔνιοι δὲ οὐκ εἰς ὑποκάστραν (σφοδρὸν γὰρ ἐστὶν) ἀλλ' ὑπερκρεμῶσιν τοῦ λύχνου ἢ ὑποκάτω αὐτοῦ ταῖσιν. ἐν ἄλλῳ δὲ οὕτως εὔρον, 57, 65. Variants of names, IV, 463, 500, 766. It is remarkable that the names inscribed on the first figure in the great Oslo papyrus do not precisely agree with those prescribed in the text (Eitrem, *P. Oslo*, I, 38); so variants could arise. One cannot always distinguish between variant readings and genuine alternatives. There are similar variants in the Demotic magical papyrus edited by Griffiths and Thompson, and in the Demotic text of the Tefnut legend (R. Reitzenstein, *Sitz. Ber. Heidelberger Ak.*, 1923, II, 28).

amulet¹. Furthermore, of the magical proceeding known as *Διαβολή*, which consists of traducing one's rival to the Moon by telling the Moon of the unpleasant sacrifices which she has offered and the unpleasant allegations which she has made, we have two recensions in iv, 2441 ff. and 2622 ff., and of the directions given in iii, 420 ff. we have two versions combined without comment². Other evidence of transcription is afforded by the presence in iv, 835–849 of a scrap of an astrological treatise, which seems to have found its way there by accident, by the note in ii, 81 *Δ κλησις*, the “fourth invocation,” which implies a form in which stood two invocations now missing from our text as well as one other still preserved³, by such an omission as that of the magical name in ii, 69 and that of the amulet in iv, 2358, by some of the many explanatory notes⁴, and by the spell v, 172 ff. introduced by *ἄλλως*, “a variant way,” which should follow 70–96, not 97–112⁵. I suspect that the heading *ἀρκτική* 1330 is wrongly repeated from 1273⁶.

The final result, if we look at iv, is a work which has in parts some sort of arrangement; 469–820 is set between the spell consisting of Homeric verses given in slightly divergent forms at its beginning and its end, and we find in 1924 and 2186 references back to 1595, and the Selene-Hecate spells are grouped together, 2442–2890. In a measure, the writer had a little of the individuality of such a man as Artemidorus. He selected from various works and added notes from experience, as for instance “I have not found any superior method in the world.” At one point he, or his source, informs us (790 ff.): “I often used this proceeding and marvelled at it. But the god said to me, ‘Do not any longer use this ointment; instead you must throw it into the river and seek oracles then by wearing the great mystery of the scarab revived through the 25 birds, and you must seek oracles thus at full moon once a month instead of three times a year’.” But in the main the compiler of any of these books has a series of previous texts which he follows closely⁷. Some of these models we see in a variety of versions. There is a magical prayer to Aion-Helios, forms of which occur in i, 205–222 and iv, 1189–1217: of one hymn to Apollo, portions occur with variants certainly in five, possibly in eight, places in our papyri⁸; of a hymn to Hermes, portions occur in three places⁹: the processes for protecting a house or place in iv, 2373 ff. and 3125 ff. are very closely akin, and P. Leid. J 395 has two versions of the cosmogony which is its main element. Figures and formulas naturally recur.

Much light is thrown on this process of development by the finding of the *φιλτροκατάδεσμος* given in iv, 335 ff. on a lead tablet now in the Cairo Museum; the tablet was discovered at Hawâret-el-Makta in the Fayyûm, probably in the great cemetery of Krokodelopolis. The tablet from its script is assigned to the third century. In general

¹ iv, 1262 ff.: cf. 1324.

² A similar conflation is noted in v, 417 by Preisendanz, in whose apparatus all these references are to be found.

³ Preisendanz, *ad loc.*: so in the MSS (except A) of *Corp. Herm.*, XIII 17 *ὑμνοῦ δία κρυπτή λόγος δ'*.

⁴ As for instance i, 248 *βοτάνην ἀγλαοφώτιδος (τὸ ῥόδον λέγει)*; iv, 31 *ἐκ ξύλων ἐλαίνων, τουτέστιν κληματίδος*, 2142, 1049, 1305, and *κοινόν, κοινά, λόγος πασιμ.* *λόγος* also in Wünsch, *Seth. Verfl.*, passim.

⁵ So i, 194 is, as Pr. notes, a simplifying corrigendum of i, 134 ff.

⁶ So perhaps in *Βασιλεί Ὀσπάνη* (2006) β. is due to confusion with Πέντος Βασιλέως (1928).

⁷ Thus he gives quite different processes for cutting herbs, 286 ff., 2967 ff.

⁸ i, 300 ff., iii, 211 ff., iv, 442 ff. and 1963 ff., viii, 74 ff.: I suspect that ii, 81 ff., which has a parallel in vi and xii, 3, 6–15, may belong to the same hymn. On the variants of Preisendanz, *Arch. f. Rel.*, xix, 195 f., in general, cf. Br. Kuster's good dissertation, *De tribus curminibus papyri Parisinae magicæ* (Königsberg, 1912).

⁹ v, 400 ff., vii, 668 ff., xvii b.

its text is inferior to that of our papyrus, which is a good century later, but it supplies one omission at least, and we must postulate a common original distinctly older than the tablet¹. As Preisendanz observes, this is a text for which the papyrus mentions variants².

For this creation of doublets an exact analogy is afforded by Byzantine magical books. A. Delatte has recently edited such a magical Corpus, divided into books, from two versions at Athens³.

§ 3. The present form of these texts belongs in the main to the fourth century, and to an unliturgical circle, as they show in their vowel-confusions⁴, in such a form as *καλλίστως* iv, 2443, and in the ruthless destruction of the metre of the hymns by insertions and rearrangement in spite of a belief in the efficacy of a fixed metrical form⁵. This must be emphasized because it excludes the idea that the redaction of these books may be ascribed to Neoplatonists interested in magic, such as Iamblichus and the other students of the *Chaldaic Oracles*. Late Neoplatonists, like other contemporary men of culture, were perfectly capable of avoiding all these errors. But while we may not ascribe to them the redaction of our texts, it is certain that Iamblichus knew them or something similar⁶, and it is clear that among the writings which lie behind these papyri were compositions of men of good education. The hexameter hymns already mentioned, some written for magical purposes, others adapted, are written in a fairly accurate and literary style⁷, like the kindred insertion in the conjuration of the dead in *Odyssey* xi, as quoted by Julius Africanus in a fragment of his *Κεστοί* preserved in P. Oxy. 412: some of them show a strong general similarity to the Orphic Hymns⁸, the *Chaldaic Oracles*, and the Clarian oracles in Porphyry, *De philosophia ex oraculis haurienda*; the conjuration of Apollo, i, 306 ff., with its sevenfold *ὀρκίζω*, is reminiscent of the Orphic *Ὀρκος*. It may be added

¹ C. C. Edgar, *Bull. soc. arch. d'Alexandrie*, xxi, 42-7. On these variants, see *Excursus*.

² *Gnomon*, ii, 192.

³ *Anecd. Ath.*, i, 1 ff. Our Gnostic books in Coptic, the Bruce, Askew, and Berlin MSS are all Corpora, with at least one doublet (C. Schmidt, *Pistis Sophia...übersetzt*, xlviii) and one fragment inserted in an irrelevant place (*ibid.*, 93, by a later hand). Here again we may regard our copies as perhaps distinct rarities, the treasured property of individual believers. The *Ecclesiastical History* of Eusebius contains repeated indications of the slight dissemination of some Christian writings. I hope to return to this topic in my *Prolegomena* to the Hermetic writings: cf. W. W. Jaeger, *Studien zur Entstehungsgeschichte der Metaphysik des Aristoteles*, 143 f. on the non-publication of some philosophic texts.

⁴ Eitrem, *P. Oslo.*, i. But note in P. Eg. Dept. 10588, recto A, 36, *ἐπιτάσσει* corrected to *ἐπιτάσσει*.

⁵ Cf. iii, 437 *λέγε ἐν ἑξαμέτρῳ τόνῳ τὸν λόγον*: a short spell in verse, v, 172 ff. The use of certain lines of Homer as a spell (Wessely, *Neue griechische Zauberpapyri*, 1 ff.: iv, 469 ff., 820, 2145: cf. O. Weinreich, *Gebet und Opfer*, 60 f. = *Genethliakon* W. Schmid, 226 f.) depends both on this feeling for form and the idea that the poet or philosopher is something of a *θεῖος ἀνὴρ*.

The feeling for rhythm appears both in this literature and in the few liturgical pass-words and acclamations which are preserved: of the 19 in Dieterich-Weinreich, *Mithrasliturgie*³, 213 ff. and 258, three are in hexameter verse, one hexameter or paroemiac, two clearly iambic (like *θύραζε, Κῆρες, οὐκέτ' Ἀνθεστήρια*), and another two seem iambic.

These indications show us the level of our writers, not their date: as Mr. Dyson reminds me, we see a similar breakdown of metrical form in the Orphic tablets from South Italy (4th-3rd century B.C.). We may compare what happened in epitaphs based on common models.

⁶ Cf. *De myst.*, vii, 3, pp. 254.5 Parthey, and on Neoplatonist magic J. Bidez, *Cat. MSS. alch. gr.*, vi, 97 ff. and *Rev. belge de phil. et d'hist.*, vii, 1477 ff.

⁷ Cf. Wünsch, *Arch. f. Religionsw.*, xii, 1 ff. and *Panly-Wissowa*, ix, 172. In i, 305, ii, 99 f., iv, 2923 the magical words fit the metre. ii, 101 ff. suggests that the Egyptian element was not adequately represented in the original.

⁸ Kuster, *op. cit.*, 52 ff., 78 ff.

that the sevenfold repetition, suiting as it does Apollo's taste for the number, is no doubt an original part of the hymn, and that the hymn reminds one also of the hymn to Apollo in Statius, *Thebaid*, I, 696 ff.; when Statius makes Adrastus offer Apollo the alternative titles of Titan, Osiris¹, and Mithras he is very possibly following a contemporary fashion in hymns, which we find later at the close of the prose hymn to Apollo Smintheus in the *Περὶ ἐπιδεικτικῶν* ascribed to Menander Rhetor². It does not seem possible to give to these hymns a precise dating within the first two centuries of our era, to which they almost certainly belong: the iambic hymn to Selene, IV, 2242-2347, may be towards the latter end of the period³, but may also be the product of a less educated man living a little earlier.

I add a few further remarks on points of language. The texts, apart from these hymns, are couched in the clear colourless language which we call the *κοινὴ*: one feature calling for particular notice is the frequent use of the vocative *θεέ*, 18 times in the first volume of the new edition, of which 10 instances are in the phrase *θεῶν θεέ* or *θεὲ θεῶν*⁴: *ὁ ἅγιος θεός* occurs as a vocative in I, 198; *ὁ θεὸς τῶν θεῶν* in IV, 1147, as in the Septuagint. The vocative *θεέ* is known elsewhere only from a deliberately irreverent passage of Oenomaus, from the Septuagint, from one passage of Josephus, and from sporadic Christian texts. This form is clearly contrary to Greek linguistic feeling⁵: but in our context it was very convenient, and the men responsible for the main body of our recipes were not sensitive on this point⁶.

On the other hand the invocations and conjurations, even when not employing hymns or definite pre-existing texts (as for instance the Hermetic prayer in III, 591 ff.)⁷, tend to fall into the formal elevated style characteristic of hymns in prose or verse of the Imperial age, with anaphora, asyndeton and balanced cola, devices which rhetoric regularized, but which rest like most rhetorical devices on the natural wish of man's ear for rhythm and

¹ Sarapis would presumably have appeared too great an anachronism.

² P. 151, ed. Bursian (*Abh. bay. Ak.*, XVI, iii): so later Nonnus, *Dion.*, XL, 369 ff. Cf. R. Reitzenstein, *Das iranische Erlösungsmysterium*, 186 ff.

³ Kuster, 123 ff.

⁴ *θεὲ θεῶν*, II, 53, IV, 180, 218, 641, 992, 999, 1048, 1195, 1200; *θεῶν θεέ*, III, 551; *θεέ*, I, 90, 94, IV, 1164, 3106; *κύριε θεέ*, II, 77; *μέγιστε θεέ Κόμης*, II, 118; *φέριστε θεέ Κόμης*, II, 122; *θεέ μέγας*, III, 581. [Another example in the Christian magical text edited by C. Wessely, *Patr. Or.*, IV, 2, 191.] In the so-called Sethianic tablets *δέε* is common.

⁵ J. Wackernagel, *Über einige antiken Anredeformen* (Progr. Göttingen, 1912): E. Löfstedt, *Syntactica*, I, 70 ff. *Θεέ* is not common in Christian liturgical texts. In the Eucharistic prayer in *Acta Thomae*, 47 (44) we find *Ἰησοῦ Θεέ ἐκ θεοῦ*; Serapion has *Θεέ τῆς ἀληθείας* in his Anaphora, the Clementine liturgy *παντοκράτορ Θεέ αἰώνι* (Brightman, *Liturgies Eastern and Western*, 9. 2); *Const. Apost.*, VIII, 37, 5 *Θεέ πατέρων*; the liturgy of St. James and that of St. Mark *ἀκατάληπτε Θεέ Λόγε* (Brightman, 61. 25, 138. 2); the Byzantine Basil liturgy *ὁ ὢν δεσπότης Κύριε Θεέ Πατήρ* (Brightman, 321. 28: modern text so, with *Πάτερ* 402. 4), but the form *Κύριε ὁ Θεός* is much commoner: this suggests that the writers of these liturgies belonged to a more educated type. But in Delatte's popular magical texts I have noted *Θεέ* only p. 48. 18.

⁶ Occasional poetic forms such as *αἶψα* III, 429, *αἰεὶ* IV, 1212, *ἰδέ* 2397, do not prove high culture. Mr. Bell has kindly drawn my attention to the fact that a feature of the Byzantine period is the intrusion of poetical words even into documentary style, as for instance in petitions. It might be fruitful to investigate whether the process had begun earlier. One feature which may be noted is the frequent *καὶ* describing fulfilment "and in fact," as I, 94 *λέγε δὲ...καὶ ἀφανής ἐστιν ὁ θεός*, 181 f., IV, 2053, 2364, 2493, 2503: P. Eg. Dept., 10588 A, 37 f. Cf. *Corp. Herm.*, XIII, 7 *ἐπίσπασαι εἰς αὐτόν, καὶ ἐλευσεται· θέλησον, καὶ γίνεται· κατάργησον τοῦ σώματος τὰς αἰσθήσεις, καὶ ἔσται ἡ γένεσις τῆς θεότητος* and *Eph.* 5. 14 *ἔγειρε ὁ καθεύδων, καὶ ἀνάστα ἐκ τῶν νεκρῶν, καὶ ἐπιφαύσει σοι ὁ Χριστός*, and also Pfister's discussion of *ὁ καὶ γέγονε* and equivalents in *Festgabe Deissmann*, 67 ff.

⁷ We must not forget the multiplicity of then existing *ἱεροὶ λόγοι*.

balance, and which must not always be regarded as due to definite rhetorical influence¹. Other features of this style are accumulations of epithets, such as we find in the Oxyrhynchus glorification of Isis (P. Oxy. 1380) and in the Orphic Hymns, and strange quasi-Aristophanic compounds *ὕδροπυρινοψυχρός* (iv, 1146), *οὐρανοκευθμωνοδιαίτους* (1351), *πυριδρακοντίζωνε* (1405), *οἰστρογενέτωρ* (1777), *νυκταιροδύτειρα* (2546), *κατα- <καμ>ψυψαύχενε* (2717), *ζωνοδρίκοντι* (2864), *βροντοκεραυνοπάτωρ* (3102), perhaps drawing a certain psychological effectiveness from their form. We have also time after time an account of a deity's achievements in the dignified asyndetic style of the early Hellenistic praises of Isis and Osiris which we know from inscriptions at Ios, Andros and Cyme², intended to remind him or her of past demonstrations of power which indicate the reasonableness of the assumption that the present request can be granted³; a notable example is the Leyden papyrus containing an elaborate semi-Jewish cosmogony ascribed to Moses, but there are many shorter examples⁴. The invocation of Eros, iv, 1748 ff., is notably elegant and literary.

§ 4. Some portions of these texts contain within themselves clear indications of a *terminus post quem*. We have noted blends of Greek and Coptic pointing to a date not earlier than the early third century of our era: the *Αἰῶνες* of iv, 1163 and 1169, and the identification of Aeon and Sophia in 1206, seem to presuppose Christian Gnosticism, and that at some removes⁵; the vague reference to Jesus "the god of the Hebrews" in 3019⁶ comes from some backwater, and need not be dated *before* the fall of Jerusalem because of the invocation "I conjure thee that dwellest in pure Jerusalem, before Whom the holy fire burns through all time," for the writer's Jerusalem may well be a Jerusalem of the imagination, and his standpoint that of the Jews in Acts xix. 13, who used the Name of Jesus as a powerful name. Recipes mentioning *unciae* are clearly of the Roman period; P. Lond. 125, called *γραῦς Ἀπολλωνίου*, is on the face of it subsequent to Apollonius of Tyana, and the acclamation *εἰς Ζεὺς Σάραπισ* in iv, 1715 is probably not pre-Flavian. We can fix more precisely the first recension of the *Διαβολή*, 2442 ff. We are there told of the *ἐπίθυμα* or incense offering: "It was shown by Pachrates, the prophet of Helio- polis to king Hadrian as a demonstration of the power of his magic. By it he brought a man to the spot in a single hour, he made him take to his bed in two hours, he killed him in seven hours, and caused a dream to come to the king himself. Hadrian marvelled at the prophet, and ordered his salary to be doubled." The story has developed from the

¹ For prerhetorical cola one may note early Latin fragments such as *hiberno puluere, uerno luto, grandia farra, Camille, metes* and the spells in Varro, *de re rustica*, i, 27 and Cato, *de re rustica*, also the preface of that work (cf. A. Kappelmacher, *Wien. Stud.*, XLIII, 168 f.) and the fragments of Latin popular songs: for "rhetoric" in Hesiod, Nilsson, *Gnomon*, iv, 613. Long anaphoric texts like *P. Oslo*, i, 157 rest partly on a semi-juristic feeling of the need of completeness (cf. *Sallustius*, xci₂₁₁). Anaphora with *οὐ* in 1 Cor. xiii. 4 or with *δ* in *Mart. Petri*, 8 does not show rhetorical training.

² Salač, *B.C.H.*, LI, 378 ff.

³ *E.g.*, i, 209 ff.

⁴ Dieterich, *Abraxas*. Cf. Schermann, *Texte u. Unters.*, 34, ii, b 2 ff. and *P. mag.*, iv, 1115 ff., 1167 ff., 1611, v, 18, 96, 459. On the principle, cf. Fr. Dornseiff, *Vortr. Bibl. Warburg*, 1924/5, 206 ff.: it is very common in Christian prayer, *e.g.*, the Ante Sanctus of the Clementine liturgy.

⁵ On *βερεβελω*, cf. R. Wünsch, *Arch. f. Rel.*, xvi, 634; P. Leid. J 395, vii, 17 (p. 809, ed. Dieterich in *Fleck. Jahrb. Suppl.*, xvi) *ἐγὼ εἰμι ἡ Πίστις ὁ ἐκπεφυκὼς ἐκ τοῦ βυθοῦ* reminds one of Bythos in such a cosmogony as that given by Epiphanius, *Panarion*, 31, 5-6, discussed by R. P. Casey, *Journ. Theol. Stud.*, xxix, 34 ff. and of Pistis in other Valentinian systems. On the relations of the papyri and Gnosticism cf. p. 232 *infra*.

⁶ Cf. *Ἰσοῦ* (= *Ἰησοῦ*) as the lord of the hour on a curse tablet from Carthage (Wünsch, *Antike Fluchtafeln*², no. 4. 21, with his notes, pp. 14, 18).

probably historical account of Hadrian's meeting with a prophet or poet called Pancrates¹. It is clearly later, perhaps not a little later, for the frank impossibility of the Emperor tolerating magical murder is clear and can more easily be ascribed to the crude ways of a later generation; the cult of Antinous would keep Hadrian's memory alive in Egypt²: but this point cannot be pressed, for the *naïveté* of the story is in keeping with the general character of the popular imagination as it shows itself in *Wundererzählungen* and in the Jewish "Martyr-acts" of Alexandria, and the *motif* of the king being instructed by the prophet is old and appears in contemporary Hermetic literature³. In this instance we have a clear *terminus post quem* for the literary setting: whether the charm took shape then or earlier we cannot say.

§ 5. Can we go further back, and assert that there is a substantial Ptolemaic element in these texts? Such an element one might expect, since the interaction of Greek thought and Egyptian tradition begins in early Ptolemaic times and with the help of Babylonian science produced before the middle of the second century B.C. an astrological work (that of Nechepso and Petosiris) destined to survive for seven centuries and to exercise great and significant influence. Unfortunately, in spite of the conservatism natural in this literature and shown, for instance, by the almost complete absence from it of the planetary week⁴, there is no evidence pointing clearly in this direction. The presence in spells of such phrases as *πρὸς βασιλέας ποιεῖ*, "it works on kings," might be thought to point to Ptolemaic times, but should be explained as resting on a popular proverbial turn of speech, like the *hunc optent generum rex et regina* of Persius II, 37 and its analogies in popular Greek songs⁵. (There were in any case kings in the nearer East in the first century of our era.)

We may pass to certain external evidence. When these papyri came to light it was obvious that they had much in common with what was known of magic from references in ancient literature, in particular from Theocr. II, Virgil, *Bucol.* VIII and *Aen.* IV, Horace, *Epodes* 5 and 17 and *Serm.* I, 8, Ovid, *Met.* VII, Lucan VI, Statius, *Theb.* IV, and the *Apologia* of Apuleius. It might appear a tempting idea that Graeco-Egyptian magical texts of this type existed in the time of Theocritus and were used by him. This would, however, be an unjustifiable inference. We know from the Scholia that Theocritus was following in some points a mime of the fifth-century Sicilian writer Sophron, and R. Herzog has recently with great skill produced from its fragments something very like the Theocritean scheme⁶. Love magic, the use of the *igny*, the rôle of the Moon, the use of *envoûtement*, and other forms of sympathetic magic by action or tale, the belief

¹ W. Weber, *Untersuchungen zur Geschichte des Kais. Hadrianus*, 258, 281. For spells to cause catalepsy and death, cf. *Dem. mag. pap.*, XXIII, XXIV.

² Cf. Weber, 89 ff. for the popular memory of Hadrian's desire for queer knowledge.

³ *C. H.*, XIV, XVII: cf. *Pap.* IV, 155, 2007.

⁴ Colson, *The Week*, 79 f., notes in the Leiden papyrus edited by Dieterich in his *Abraxas*, the planets in the week order, called "Greek," as well as in the ordinary arrangement, and "Mars' Day" as unlucky in Sethianic tablets (Wiensch, *Seth. Verft.*, 79). Perhaps the truth is that the habit of reckoning by the week did not become popular in Egypt. There is no sign of weekdays in the ordinary papyrus documents indexed by Preisigke, *Wörterbuch*, III, 90 ff. (*ἡμέρα ἡλίον* in a school-exercise: Boll, *Pauly-Wissowa*, VII, 2575): this is of interest in view of the tradition which derived this system from Egypt. So far as I have noticed in the Byzantine texts published by Delatte, just as in these papyri, dates are normally given by reference to the moon's phases although there are superstitions attaching to the days of particular planets (e.g., I, 69, 397). Days so reckoned are important in the papyri: cf. Hopfner, *Pauly-Wissowa*, XIV, 354 ff.

⁵ *P. Oslo.*, I, 43, with Eitrem's note, and W. R. Halliday, *Cl. Rev.*, 1924, 169; Pliny, *N. H.*, 37. 124 *reges adituris*; *Dem. mag. pap.*, XV, 24.

⁶ *Hessische Blätter für Volkskunde*, XXV, 217 ff.

in the constraining power of spells¹, these things are all known to earlier Greece: they are usually thought somewhat disreputable, but they are employed². Moreover all these things, and certain others (the requirement of certain atmospheric and other conditions for action, the use of a spell to close the action, much of the definite *materia magica*³, and the use of foreign or meaningless terms in spells)⁴, are part of magic not only in classical Greece but in other times and places. And the special position of Hecate-Selene and her kind in magic, the special rites directed to her, pass into Graeco-Egyptian magic as one of its constituent elements.

But in all this we miss certain features characteristic of our papyri, the threats to deities, the constraint of one deity by another of greater power, the methods adopted if the first spell does not work at once, the technique of getting a spirit or deity as a *πάρεδρος* or consort, the technique of *σύστασις πρὸς Ἥλιον*, personal self-introduction to the friendship of the Sun-god, the accumulation of Egyptian, Jewish and Babylonian divine names, the use of Jewish angelology. Some of these things we do however find in Lucan, writing as he did in the middle of the first century of our era and eager as he was to improve on traditional models and use his learning. In the sixth book of his epic we read how Sextus Pompeius saw fit to consult a Thessalian witch Erichtho. Thessalian witches were proverbial in Greece, but this one had moved with the times: *inque nouos ritus pollutam duxerat artem* (509)⁵. Her taste for portions of those who have died by violence (543 ff.) is common to her and to the papyri: her voice, imitating dogs, wolves, screech-owls, snakes and the like (688 ff.), has some analogy in the *συριγμός* and *ποππυσμός* prescribed (as for instance iv, 578 ff.) and in directions in v, 24 ff. to utter a formula *α ο ι α ω ε ο η υ*, "the *α* with mouth open, in a billowing way, the *ο* briefly, to frighten off spirits (?), the *ι α ω* directed to earth, air and heaven, the *ε* like a dog-faced baboon, the *ο* as before, the *η* with enjoyment, thickening it, the *υ* like a shepherd, making it long⁶."

Her invocation is of particular interest. She invokes the Eumenides, other underground powers, Persephone, the Fates, Charon, to allow the dead man required to be restored to life *ad hoc*, just as in iv, 1932 ff. Helios is asked to give the magician power over a particular dead man. There is a delay, and Erichtho in anger threatens to summon forth the Furies by their real names, to leave the Stygian bounds high and dry in daylight, to show Hecate as she is in Erebus to the gods of the underworld, to tell the real reason⁷ why Persephone stays below, to let in light on the underworld. "Do you obey," she continues, "or must I address myself to him on whose calling the earth is always shaken, always quakes—in whose hand you celestials are?" All goes well. Now this delay in a spell's operation, followed by other or more drastic rites, is a common feature of our texts⁸: the threatening of the powers invoked to which Lucan has referred a little earlier

¹ Plato, *Leges*, 932 E; Fr. Pfister, *Pauly-Wissowa*, Supp., iv, 323 ff.; for *enchantment*, my note, *Arch. f. Rel.*, xxiv, 172.

² For linguistic traces of an earlier stage in which this contempt was not felt, cf. Pfister, *Gnomon*, v, 96.

³ In the papyri there are marked Egyptian elements in the *materia*, cf. Hopfner, *Pauly-Wissowa*, xiv, 311 ff.

⁴ Found elsewhere; cf. K. Beth, *Handw. Abergl.*, II, 162. Cf. again the method of catching a thief in Pap. v, 70 ff. with Germanic methods (Müller-Bergström, *Handw.*, II, 222).

⁵ On the whole passage cf. L. Fahz, *De poetarum Romanorum doctrina magica* (*Relig. Vers. Vorarb.*, II, 3).

⁶ Cf. Griffiths-Thompson, *Demotic magical papyrus of London and Leiden*, col. I, 17 and note, VII, 32 for directions as to tone of voice, and Dieterich-Weinreich, *Mithrasliturgie*³, 40, 69, 228, 233 for special sounds.

⁷ At which she hints.

⁸ II, 45, 51, 144; iv, 917, 1036 *ἐπανάγκος ἐάν πως βραδύνη*, 1434, 1903, 3089, 3228; *Dem. mag. pap.*, vi, 21, VIII, 1. A guaranteed quick spell iv, 2071: cf. also A. H. Gardiner in *Enc. Rel. Eth.*, VIII, 265.

in his philosophic disquisition on magic, 496 *an tacitis ualere minis*, and which Statius ascribes to Tiresias in a necromantic scene, *et nobis saeuire facultas*¹, is one of the commonest phenomena in our papyri²: compulsion by a superior power, like the *triplicis mundi summum, quem scire nefastum est* of Tiresias³, appears expressly in the prayer to Typhon, "Strengthen me, I beseech thee, and grant me this grace, that whenever I bid any one of the gods themselves to come he may swiftly come in answer to my spells and appear⁴," and is implied by the frequent practice of conjuring a spirit or deity to appear in the name of a mightier, as for instance iv, 1038, "The great living God orders thee, He who is for ever and ever, who shakes the earth, who thunders, who made every soul and all creation...come...for I conjure thee by the lord Iao⁵." Again, the threat (732) *iam uos ego nomine uero eliciam* rests on the principle which is continually implied in the papyri and is indeed a commonplace in magic generally, that the knowledge of a deity's true name gives one power over him: as a single illustration we may take iv, 277 "O mightiest Typhon, hear me, N.; and do *x* for me: for I tell your true names⁶." Further, the revelations about Persephone which are threatened in case of delay are distinctly like what the speaker in both forms of the *Διαβολή* accuses her rival of having said against Selene⁷.

Lucan was clearly interested in magic, as his introductory disquisition shows, and clearly has genuine information, perhaps gained from the philosophic circle interested in Pythagoreanism in Rome with which his uncle Seneca had in youth been associated or from friends of Statilius Taurus, who was accused of *magicæ superstitiones*⁸. We may compare the way in which, when speaking of Celtic religion, he does what is very rare; he gives the local names of deities, Teutate, Esus, Taranis, and not their Roman equivalents⁹; that also was out of the way information. Lucan's account of magical practices is highly coloured, and not to be taken *au pied de la lettre*, but it seems clearly to indicate the existence of magic very like that of our papyri. If we turn to Apuleius and his defence on a charge of magic, we find much talk of a small image said to be of Hermes, like the wooden Eros, whose preparation is described in Pap. iv, 1840 ff.¹⁰, and Julius Africanus, writing at the beginning of the third century of our era, quotes the Homeric Nekyia with an interpolated passage very similar in matter and style to the magic hymns mentioned earlier. This quotation shows the interest of a man of learning at that time in this literature: such interest is further illustrated by the source which Hippolytus must have used for his discussion of the art in *Refutatio*, iv, 28 ff.¹¹

§ 6. We may fairly claim that by the first century of our era, Graeco-Egyptian magic had taken shape. When and how it did so we cannot say: perhaps the learned hymns

¹ *Theb.*, iv, 513.

² *E.g.*, iv, 2095 *τελέσαντι δέ (?leg. μέν) σοι θυσίαν ἀποδώσω, βραδύναντι δέ σοι κολάσεις ἐπενεγκῶ ἄς οὐ δύνασαι ἐνεγκεῖν*, or iii, 536 *μὴ τὸν οὐρανὸν κινήσω*. A magnificent threat in iv, 2310 ff.

³ 516. Cf. the circumlocution *κατὰ τοῦ ὑπὸ τὴν Ἀνάγκην τοῦ κατέχοντος κύκλου* in a Sethianic tablet (Wünsch, 93; Preisendanz, *Akephalos*, 25).

⁴ iv, 197.

⁵ Curiously enough the deity so to be constrained is himself addressed as *inter alia* Ἰαώ (1010). Cf. 1239, 1533, 1910, 2060, 3019 ff.

⁶ Cf. iv, 2343 ff.

⁷ iv, 2478 ff., 2654 ff., well handled by S. Eitrem, *Symbolae Osloenses*, ii, 43 ff. (A short *διαβολή* in *Dem. mag. pap.*, xxi, 21 ff.)

⁸ *Cl. Rev.*, 1924, 106 f.

⁹ Wissowa, *Arch. f. Rel.*, xix, 9.

¹⁰ Cf. P. Leid. V, i, 14 ff.; Wünsch, *Seth. Verfl.*, 97, 113.

¹¹ Africanus possibly composed one spell; cf. O. Weinreich, *Gebet und Wunder*, 61₄₈ (= *Genethliakon Schmid*, 221). On the source of Hippolytus, cf. R. Ganschinietz, *Texte und Untersuchungen*, xxxix, 2.

of which I have spoken are due to adherents of the Neopythagorean revival which is conspicuous from early in the first century B.C. onwards, and revived much of Orphism and of other submerged strains in popular religion. Neopythagoreanism was interested in magic¹ and could, by the doctrine of sympathies, give to its *materia* a theoretical basis. This movement can hardly have failed to have repercussions in Alexandria, and we may conjecture that men who in some way belonged to it were responsible for much of the systematization of magic. The more elaborate spells are carefully composed². They commonly contain an *ἐπίθυμα* or incense offering, which reminds us of the *θυμίαμα* prescribed for most of the Orphic Hymns³. It may further be remarked that in the papyri there is little of the animal sacrifice which Neopythagoreans deprecated, and there are frequent instructions to eat no meat when you are preparing for a rite. Now we find the Neopythagorean Anaxilaus (banished from Rome in B.C. 28) expressly credited with being one of the sources from whom the Valentinian Marcus borrowed his magic, and it has been suggested by Wellmann that Anaxilaus revived the systematic study of magic⁴. I would urge that the papyri confirm the general idea behind this, and that their characteristic forms were shaped by some Neopythagorean. We should then credit this school with a substantial share in the practice as well as in the theory of magic: even traditional practice ultimately goes back to individuals.

Of the components of this magic something has been said. We see in it a blend of Greek magic of the Hecate type⁵ with Egyptian and Jewish elements. Egypt's contribution was important. Magic was not here as in Greece under a cloud; the gods were credited with its invention and with the use of spells⁶. Further, there was here a belief in evil divine powers, above all Set-Typhon, making possible a sort of Satanism⁷. Again, Egypt had a magical literature committed to writing, in which occurs the device (common in our papyri) of the magician pretending to be a deity, the threats to deities which we know so well, the ascription of supernatural nature to the material employed, and the use of incomprehensible formulas: and in Egypt the tradition had an antiquity which moved deeply the imagination of immigrant Greeks. For the spells, Egypt gave the kernel of the *λόγος*. Judaism could offer its belief in the tremendous power and sanctity of the Name of God, its exorcisms, its angelology, its amulets and frontlets⁸, and its impressive consciousness of close and personal relation with God "the living one"⁹, keenly

¹ *Cl. Rev.*, 1927, 170; 1929, 60 f. Both Orpheus and the *Orphica* of Erotylos are quoted in P. Leid. W (Dieterich, *Abraxas*, 202).

² The old Egyptian magical texts mostly give the formula without describing the rite (F. Lexa, *La magie dans l'Égypte antique*, I, 99): the great Demotic magic papyrus is full and like our Greek text, but it comes from a Graeco-Egyptian *milieu* and has Greek elements.

³ So also Babylonian tablets, though they sometimes mention flesh-offerings (King, *Bab. Magic*, xxix): *θυμίαματα* of planets, Delatte, I, 404 ff.

⁴ *Die ΦΥΣΙΚΑ des Bolos Demokritos und der Magier Anaxilaos aus Larissa*, I, 57 (*Abh. preuss. Ak.*, 1928, VII: most important).

⁵ Hecate and her rout appear also in *Pistis Sophia*, ch. 140.

⁶ Hopfner, II, 3.

⁷ *E.g.*, IV, 179 ff. and *P. Oslo.*, I, 4 ff., 77 ff.; Wünsch, *Seth. Verfl.* (with the limitations of Preisendanz, *Akephalos*); A. Jacoby, *Arch. Rel.*, xxv, 276; *Dem. mag. pap.*, col. xxiii, 9.

⁸ v, 160 ff.: cf. *Apoc. Ioh.*, 2, 17 with Lohmeyer, *ad loc.* and Eitrem, *P. Oslo.*, I, 41.

⁹ IV, 1553 For Graeco-Judaic magic with Egyptian elements in Asia Minor, cf. R. Wünsch, *Antikes Zaubergebiet aus Pergamon* (*Arch. Jahrb.*, *Erg.-Heft VI*): for Hecate magic, cf. *J.H.S.*, XLVI, 50 ff. It is possible that Jewish magic brought with it survivals from the great magical literature of Babylon, on which cf. Br. Meissner, *Babylonien und Assyrien*, II, 198 ff. To judge from the specimens published by L. W. King, *Bab. Magic* and by Tallquist, *Assyrische Beschwörungsserie Maglû*, it lacked characteristic

interested at all times in the individual and prepared to interfere cataclysmically with the course of events. The Jew of heterodox or accommodating tendencies (like Elymas in Acts xiii) is a very important figure in Hellenistic religious evolution. We have Orphic, Sibylline and Hermetic texts coming from Jews who used them as a vehicle of monotheism free from rigorous Jewish requirements¹. The use of Judaism in magic has a long history: one need only allude to the rôle of the "seal of Solomon" in Christian and Mohammedan superstition².

Graeco-Egyptian magic draws on all these sources of religious energy, and on such other Greek and Oriental material as it can control. The blending which has taken place appears clearly in the *uoces magicae* or non-Greek names of gods. They include meaningless combinations of letters, combinations with numerical value and significance, vowel combinations³, genuine Egyptian divine names, Coptic divine or daemonic names or offshoots thereof, old Greek Ἐφέσια γράμματα, at least one Babylonian divine name, Ereschigal, one possibly Assyrian name, Eulamo⁴, Jewish sacred names, possibly Iranian and Mandaean names, and Greek names in correct or broken-down forms⁵.

Our texts are rooted in Egypt; humanity is referred to as "all men, Egyptians, Greeks, Syrians, Ethiopians, and every tribe and every race⁶."

Yet in magic Graeco-Roman Egypt both gave and borrowed, and these papyri have much in common with magic from other parts of the ancient world, with its medical recipes⁷, with Latin herbal spells⁸, with *devotiones*⁹ and *defixiones*¹⁰, with superstitions relating to gems and stones¹¹, with Neoplatonic theurgy, not to speak of the definite Hecate-magic

features of Egyptian magic. Evil demons are ordered to depart and are threatened (Tallquist, I, 21), but the gods are addressed in respectful prayer, and threats are not directed against them, and though the magician refers to their support he does not impersonate them. Much Babylonian magic is simply private ritual of an innocent if fear-haunted type.

¹ On Jewish penetration of society, cf. my *Early Gentile Christianity*, 54 f. (in *Essays on the Trinity and the Incarnation*, ed. A. E. J. Rawlinson). Pap. v, 96, the "Ieou" stele is a Jewish variant of the Isis glorification of the type discussed, p. 224 *supra*.

² Pap. IV, 850; Perdrizet, *Negotium perambulans in tenebris*; Wunsch, *Ant. Fluchtaf.*², 4, 15 and note; Peterson, ΕΙΣ ΘΕΟΣ, 94; Grégoire, *Inscr. gr. chrét.*, I, 90 *bis, ter*; A. Jacoby, *Handwört. d. Aberggl.*, II, 88 ff.; Sartori, *ibid.*, 179 ff. (on David, who appears in German superstitions but apparently not in magical papyri).

The Jewish element (e.g., the τετραγράμματον) is prominent in Delatte, *Anecd. Ath.* and in Byzantine exorcisms (Papadopoulos, *Ann. soc. ét. byz.*, III, 225 ff.).

³ Fr. Dornseiff, *Das Alphabet in Mystik und Magie*.

⁴ R. Ganschinietz, *Arch. Rel.*, XVII, 343.

⁵ v, 473 ff., Syrian and Hebrew names; R. Wunsch, *Ant. Fluchtaf.*², 1, 14 κελευνόμενοι ὑπὸ τῶν ἱερῶν ὀνομάτων ἀβραϊκῶν τε ὀρκισμάτων. On the effectiveness of names in the original languages, cf. Origen, *Contra Celsum*, I, 24-5; Iambl., *De myst.*, VII, 5, and G. Bardy, *Recherches de science religieuse*, XVIII, 133 ff. *Pistis Sophia*, ch. 137, p. 264. 31 ff. transl. C. Schmidt (1925) gives the immortal as well as the ordinary (Greek) names of the planets: *ibid.*, ch. 143, p. 276. 36 on the power conferred by knowledge of the true names.

⁶ v, 256 ff.: cf. P. Leid. V, col. viii, 16 (Egyptian, Jewish, Greek and Parthian forms of the sacred name). We read, IV, 2967, παρ' Αἰγυπτίους ἀεὶ βοτάναι λαμβάνονται οὕτως, not παρ' ἡμῖν as one might expect; παρ' Αἰγυπτίους is more solemn and majestic. Josephus often says not ἡμεῖς but Ἰουδαῖοι (E. Norden, *Neue Jahrb.*, 1913, 646; modified by R. Eisler, *ΙΗΣΟΥΣ ΒΑΣΙΛΕΥΣ*, I, 73_s).

⁷ It is not possible to draw a hard and fast line between these and magical recipes.

⁸ IV, 286 ff., 2967 ff.; *Folklore*, 1925, 93 ff.

⁹ IV, 296, 338 with Preisendanz, *ad loc.*; v, 334; Dieterich, 42 ff.; Schermann, *Texte und Unt.*, 34, ii b, 14 ff.

¹⁰ IV, 2212, a spell to break chariots, like the Latin tablets from Carthage, etc. in Audollent, *Defixionum tabellae*.

¹¹ Preisendanz on IV, 1726.

element which we have discussed. We are warned against any treating this magic too much as a thing apart by the occurrence of the "sword of Dardanus," as prescribed (iv, 1716) on a gem found at Beyrouth¹ and by the discovery of identical *nomina* on tablets in the Rhineland².

§ 7. The combination of deities in magical texts does not necessarily involve syncretism or the blending of deities, though in our texts it comes at a time when that process had borne fruit far and wide. The magician plays a lone hand, using the power of traditional beliefs in his own way, for his own ends, often as a lien on a god rather than as a means of approach to him.

This brings me to my last topic, a queer strain which we encounter from time to time in these texts. Lucan, when he enquires into the explanation of the power wielded by witches, asks (vi, 495 f.):

*ignota tantum pietate merentur,
an tacitis ualere minis?*

There is an element of *ignota pietas* in magic. It appears chiefly in the process called *σύστασις πρὸς Ἡλίον*, an introducing to the Sun-god³. The verb is used of the winning of a *πάρεδρος*, or deity serving as a familiar spirit in i, 179 f.⁴: "for a spirit of air united with a mighty *πάρεδρος* will not go to Hades," which follows on the promise that the *πάρεδρος* will bury the magician's body with divine honours and carry his soul into the air. The Sun is perhaps too important a deity to play the part of *πάρεδρος*, but the process of *σύστασις* leads to the same result. The man who has gone through it is in a new spiritual condition; he possesses various magical powers now and a better expectation in the hereafter, having become possessed of a god-like nature⁵.

The best specimen of this process is that preserved in the Mimaout papyrus⁶. The disciple is to invoke the Sun and ask him to fulfil his prayers, saying, "For I know thy signs and symbols and shapes, who thou art at each hour," and proceeds to describe the Sun's twelve shapes⁷. "I have told thy signs and symbols; therefore, O Lord, do *x* for me of necessity, lest I shake the heavens...Come hither...god of gods...for I invoke thy holy name...Fill us with thy spirit. Thy name on the axis side of the world is *M.*, on the left is *N.* Come to me with smiling face to voluntary union, giving to me, *N.*, life, health, safety, riches, children, gnosis, good spirits, good counsel, good repute, memory, favour, shapeliness, beauty in the eyes of all who see me⁸. Thou who hearest my every petition, grant that my word may be trusted...I beseech thee, O king, hear my request, for thou hast bidden me lift my soul to thee, that thou mayst illuminate my knowledge (?)"

¹ R. Mousterde, *Mélanges de l'Université Saint-Joseph, Beyrouth*, xi, 179 f. (Another magical *μαχαίρα*, Delatte i, 46.)

² A. Wiedemann, *Bonner Jahrbucher*, LXXIX, 215; M. Siebourg, *ibid.*, ciii, 123 ff. [For similar *nomina* and *characteres* later in Germany, cf. A. Jacoby, *Handwort. d. Aberggl.*, i, 1465; Dornseiff, *ibid.*, 1698.]

³ So Preisendanz, *Wiener Studien*, xl, 2 ff. Examples are iii, 495 ff.; iv, 168 ff., 930 ff. (to secure answer to questions, 1032 ff.: with much theological material, cf. S. Eitrem, *Symb. Oslo.*, iv, 41 ff.); v a; vi. Cf. the prayer to the Sun in *P. Oslo.*, i, 211 ff. with Eitrem's notes, pp. 84 ff. Apuleius, *Apol.* 26, speaks of the magician's power as resting on *communio loquendi cum deis immortalibus*.

⁴ Cf. K. Svoboda, *La démonologie de Michel Psellos*, 43.

⁵ iv, 220: exactly as in a mystery (*Early Gentile Christianity*, 105); for the promise hereafter, cf. *Apul. Met.*, xi, 6 and, in general, Hopfner, ii, 41, § 77, and on the overcoming of Fate, *ibid.*, 55, § 106.

⁶ iii, 495 ff. Its religious importance was first stated by Reitzenstein, *Poimandres*, 146 ff.

⁷ For this mode of constraint, cf. p. 227 *supra* and iv, 1596.

⁸ Similar lists of blessings in iv, 684, 2171 ff.; Schermaun, *Texte u. Unt.*, 34, 2 b, 45; *P. Oslo.*, i, 45; a prayer for deliverance from all evil, *P. Lond.* 122. 33.

and, after the kindly restoration of my material body¹, receive, I beseech thee, O Lord, this request of mine, this supplication, this presentation of myself, the lifting up (offering?) of my vocal spirit²: may it come to thee, the lord of all, that thou mayst fulfil all that is in my prayer³. We thank thee with our whole soul, in hearts lifted up to thee," and then follows the rest of the prayer of thanksgiving, which terminates the Hermetic *Λόγος τέλειος* (known to us in a Latin translation called the *Asclepius* and wrongly ascribed to Apuleius). There is here a queer mixture of threats with prayers, of ideas of blessedness and gnosis with the old crude metaphor of the sacred marriage⁴.

Another illustration of this mystical piety is afforded by prayers to Hermes (Thoth) in P. Lond. 122, "Come to me, lord Hermes, as babes come into the wombs of women.... I know thee, Hermes, and thou knowest me. I am thee and thou art I.... Give me grace and victory and success and riches: for thou art I and I am thou. Thy name is mine, my name is thine, for I am thy image⁵." Here the basis in Egyptian thought and in the plain self-identification of the magician with the god is clearer: but the thought and emotional pitch are mystic⁶.

We are here in the sphere of individualist religion. And this, as Reitzenstein has observed, is the key to the understanding of the so-called *Mithrasliturgie*⁷. That document is neither a liturgy nor, properly speaking, Mithraic. It is an *ἀπαθανατισμός*, directions how one shall make oneself immortal and pass through the heavens: it has Persian features, the ascription to Mithras, possibly its element theory, the picture of the god "in a white chiton and a crimson cloak, with a fiery crown" (iv, 636), "very great with a shining face, young with golden hair, with a white chiton and a gold crown and trousers, holding in his right hand a golden calf's shoulder which is the Great Bear⁸." But essentially it is one of our Graeco-Egyptian revelation texts, professing to give unique salvation: as it says (484) "that I may alone enter heaven and see everything," and later (647) "I out of many myriads, having been made immortal in this hour in accordance with the god's will⁹." Here the element of magical constraint is slight: *ἐάν δὲ ὑμῖν δοξῇ*, "if it be your will" comes near the beginning (499), *ἐάν σοι δόξῃ* later (642); though here also, in addition to the prospect of self-transformation, there is the possibility of making

¹ Has something like I, 179 f. fallen out?

² τὴν ἀναφορὰν τοῦ πνεύματος τοῦ λεκτικοῦ: "die Erhebung des auserwählten Geistes," Preisendanz; but can λεκτικός bear the meaning of λεκτός, ἐκλεκτός? I suspect that the meaning is something like λογική θυσία, on which cf. *E.G.C.*, 150 and my *Liturgical Notes* in *J.T.S.*, 1929.

On πνεῦμα in these texts, cf. R. Reitzenstein, *Die hellenistischen Mysterienreligionen*³, 308 ff.

³ ὁ καὶ φθασάτω, κτλ.: curiously reminiscent in form of *quam oblationem* or *supra quae propitius* in the Gelasian Canon of the Mass.

⁴ I. 574 ἐλθέ μοι ἰατρῶ τῷ προσώπῳ ἐπ' αὐτοθελ[ήτῳ] κοίτῃ. Cf. I, 289 ἀπεχόμενος ἀπὸ πάντων μυσσάρων πραγμάτων καὶ πάσης ἰχθυοφαγίας καὶ πάσης συνουσίας ὅπως ἂν εἰς μεγίστην ἐπιθυμίαν ἀγάγῃς τὸν θεὸν εἰς σέ.

⁵ σὺ γὰρ εἰ ἐγὼ καὶ ἐγὼ σύ: also in P. Leid. J, 395 (Dieterich, *Abrahas*, 196. 17). Cf. Reitzenstein, *Poimandres*, 20 ff.: οἶδέ σε ἐρμῇ καὶ σοὶ (*sic*) ἐμέ recurs later as a refrain in P. Lond. 122. I would remark on the presence of the idea in *Pistis Sophia*, p. 168. 18 of Schmidt's 1925 translation, "Jene Menschen sind ich und ich bin sie."

⁶ For parallels, cf. Weinreich, *Arch. f. Rel.*, xix, 165 ff.

⁷ *Zeit. neut. Wiss.*, xiii, 13.

⁸ Dieterich, *Mithrasliturgie*, 76 ff.; cf. the picture of Mithras in the Mithraeum at S. Maria di Capua published by Minto, *Notizie degli Scavi*, 1924. On τοῦ λειτουργοῦντος ἀνέμου, cf. F. Behn, *Das Mithrasheiligtum zu Dieburg*, 17, and Cumont, *Journal des Savants*, 1927, 1242.

⁹ P. Eg. Dept. 10588 A, 24 ὁ οὐκ ἔξεστιν ὄνομα οὐδενὶ ὀνομάζειν εἰ μὴ μόνῳ ἐμοὶ διὰ τὴν αὐτοῦ δύναμιν; cf. Weinreich, *Gebet und Opfer*, 3 ff. on egoism in popular prayers. One further point which may be noted is that some of the magical formulas are in effect (whether any of the users realized it or not) psychological means of producing a particular mystical state of mind: cf. J. W. Hauer, *Die Dhāzani im nördlichen Buddhismus und ihre Parallelen in der sogenannten Mithrasliturgie* (1927) for an instructive analogy.

specific requests which the god will grant (777). The magician can, in an ordinary spell, feel himself unique; so in an invocation of *Σμύρνα*, the spirit of frankincense: "Everyone calls thee frankincense, but I call thee flesh-eater and inflamer of the heart" (1503). It is to such circles that the Coptic *Pistis Sophia* was addressed, which professes to give the truths not previously revealed by Jesus to the disciples and a mystery superior to ordinary magic¹.

What of the relation of this sort of text to popular Gnostic books? Such *συστάσεις* are obviously akin to *Pistis Sophia*, ch. 109, the mystery superior to Fate; ch. 110, the mystery causing all prayers to be answered; or ch. 143, "the mystery of the name" which makes its possessors superior to all daemonic powers, and the description of the celestial accompanying effects of the *Mithrasliturgie* is like *Pistis*, ch. 136, while the same part of *Pistis* includes magical prayer which constrains "for I know thy great powers" (142 f., 275. 15), and we find up and down the work formulas of the type known from our papyri. The truth is I think that, while the two spheres have much in common, and while elements from the Gnostic writings have reached magic and elements from the magic writings have reached this sort of Gnosticism, there is an essential difference of tone. The authors and readers of the *Pistis Sophia* (like Neoplatonist students of theurgy) were passionately eager to know how the wheels went round, the authors and readers of the magic papyri desired simply to be able to make them turn². Both circles wanted to make themselves secure here and hereafter, but while the men of the magic papyri thought vaguely of the hereafter and wanted a good funeral and safety from threatening supernatural powers, the Gnostics wanted salvation and were, like orthodox Christians, preoccupied with sin. For them Hell was peopled with new terrors added to the old, and the standard of heavenly happiness was higher. Further these Gnostics of the lower type, far as they are from the Gospel, far as they are from the intellectual constructiveness of Valentinus, do look to the Psalms and to the Odes of Solomon, and to the New Testament as an inspired source and standard. Here, as with the Naassenes and with the Gnostics discussed in Clement's *Excerpta ad Theodotum*, allegorical exegesis is an essential implement. They all interpret in their own queer way, with many alien ideas; but they think of themselves as interpreters of a specially inspired type, and their central scheme is a definite mythological Christianity which stands in sharp contrast with the haphazard Olympus of the papyri. And so we find them despising magic and including it in the list of sins to be forsworn³ or explaining that the power of the spells directed to fallen angels has been reduced⁴. Yet their relations were close. The Valentinian Marcus, like Simon Magus, was accused by his enemies of magical wonder-working⁵, and some of the Gnostic *nomina* in our texts may be due not to vague hearsay but to the fact that the books had passed through the hands of Gnostics.

The papyri belong to a *milieu* similar but different. For their *συστάσεις* we have a good parallel in *Corpus Hermeticum*, XIII, which includes a mystic rebirth of the initiate, without any of the material methods of spells of our texts but yet akin⁶, and other parallels

¹ P. 21 of Schmidt's translation.

² P. Leid. W gives the famous cosmogony edited by Dieterich in his *Abraxas*: but this is part of a method to secure a revelation, it is not *gnosis* for the sake of *gnosis*.

³ *Pistis*, ch. 102, p. 189. 3.

⁴ Ch. 15, p. 17. 30; the kernel of the idea in Dyn., *Eph.*, 19.

⁵ Wellmann, *Φυσικά*, I, 56, 80.

⁶ *E.g.*, in the hymn XIII, 17, the prayer for the opening of the heavens well put into relation with its magical parallels by O. Weinreich, *Gebet und Wunder*, 199; cf. 181 (= *Genethliakon* Wilhelm Schmid, 365, 347); cf. also III, 198 and with the following μέλλω γὰρ ὑμνεῖν cf. IV, 2475 βαινὼ γὰρ καταγγέλλων as well as P. Oxy. 1381, 218 μέλλω γὰρ αὐτοῦ τερατώδεις ἀπαγγέλλειν ἐπιφανεῖας (adduced by Reitzenstein, *Nachr. Gött. Ges.*, 1917, 133).

in a *προσκύνημα* at Talmis by a worshipper of the local Sun-god Mandulis, after he had desired to know if Mandulis really was the Sun-god and had been assured by a vision¹, in documents of the Neoplatonic theurgy based on the Chaldaic Oracles, in the initiation described in the *Confessio S. Cypriani*² and such texts as the *Apophthegmata Patrum*. It is instructive to find this mysticism in the magic papyri side by side with the crude recipes to secure unedifying ends. It had its appeal. In an age of bureaucracy and of a pressure of material civilization like ours and material needs less tempered by charity, such religious individualism opened doors which let men somehow think they saw the things above the iron heaven which shut them in.

I would close by remarking on three tasks which await accomplishment. First, the proper study of the *voces magicae*; second, the making of a Corpus of magical drawings in the papyri and an accompanying study of their iconographic bearings; third, the making of a Corpus of the so-called Abraxas gems. In this region of shadows there is room for more workers, and the exploration of these byways of the human mind should not be regarded as unworthy or as likely to prove fruitless.

EXCURSUS.

A comparison of the readings of the Cairo lead tablet with those of Papyrus IV, 335 ff. (See above pp. 221-2.) < > denotes what is missing from the other text.

PAPYRUS IV	TABLET
<i>peculiar vulgarisms</i>	<i>peculiar vulgarisms</i>
341 κλίδας 347 ἀνέγειραι	336 παρακατα[θ]τ[ι]θομαι ὑμῖν 343 ἐννιαυτούς 347 διέγειρε 348 ἀρσης (as P. also in 361) ἰς for εἰς repeatedly 348, 362 θήλια (-us P. correctly) [Does not as P. elide ποτ' εἰ in 347] We may reckon in this class 337 Εροσχιγαλ 339 Θεουθ
<i>peculiar errors</i>	<i>peculiar errors</i>
342 <θεοῖς> ἰώροις ³ 342 τε for δέ	336 omits τοῦτον τὸν κατάδεσμον 346 συνπαραστατε for συνπαρασταθῆναι
<i>genuine variants</i>	<i>variants</i>
336 θεοῖς χθονίοις Υεσµιγαδων	θεοῖς καταχθονίοις <καὶ θεαῖς καταχθονίαις Πλού- τωνι> Υεσµιγαδωθ
	338 Ἀδώνιδι τῷ <καὶ> Βαρβαριθα. Perhaps due to a man unfamiliar with the style of magical papyri and familiar with double names and <i>signa</i>
339 after θουοθ four <i>nomina magica</i>	339 <καὶ> Ἑρμῇ, perhaps rightly
341 ψιρινθ	ψιριφθα or ψιριφθ (Edgar 47)
	345 πάντας <τούς> δαίμονας
347 καὶ ἀνέγειρέ μοι σαντὸν ὅστις	347 διέγειρε μ. σ. <νέκυσ δαίμων> ὅστις. Probably gloss

¹ The Mandulis text in Preisigke, *Sammelbuch*, 4127. I hope soon to treat it in *Arch. f. Rel.*

² *J.T.S.*, xxviii, 412 ff. An initiation conveying all knowledge in *Pistis Sophia*, ch. 91.

³ Here the tablet confirms Weinreich's conjecture.

PAPYRUS IV

349 καὶ (ἄξον καὶ) κατάδησον. (ἄξον) τὴν δείνα ἣν δείνα (ἣς ἔχεις τὴν οὐσίαν φιλοῦσάν με τὸν δείνα ὃν ἔτεκεν ἡ δείνα)· μὴ βινηθήτω, μὴ πυγισθήτω μηδὲ πρὸς ἡδονὴν ποιήσῃ μετ' ἄλλου ἀνδρὸς εἰ μὴ μετ' ἐμοῦ μόνου τοῦ δείνα ἵνα μὴ δυνηθῇ ἡ δείνα μήτε πείν μήτε φαγεῖν μὴ στέργειν μὴ καρτερεῖν μὴ εὐσταθῆσαι μὴ ὕπνου τυχεῖν ἡ δείνα ἐκτὸς ἐμοῦ τοῦ δείνα¹ ὅτι σὲ ἐξορκίζω

κατὰ τοῦ ὀνόματος τοῦ φοβεροῦ καὶ τρομεροῦ οὗ ἡ γῆ ἀκούσασα τοῦ ὀνόματος ἀνοιγήσεται οὗ οἱ δαίμονες ἀκούσαντες τοῦ ὀνόματος ἐνφύβου φοβηθήσονται, οὗ οἱ ποταμοὶ καὶ αἱ πέτραι ἀκούσαντες τὸ ὄνομα ῥήσσονται

ὀρκίζω σε νεκύδαιμον εἴτε ἄρρης εἴτε θήλυς κατὰ τοῦ βαρβαριθα χενμβρα βαρουχαμβρα καὶ κατὰ τοῦ αβρατ αβρασας σεσενγεν βαρφααραγγης καὶ κατὰ τοῦ αωια μαρι² ἐνδόξου καὶ κατὰ τοῦ μαρμαεωθ μαρμαρανωθ μαρμαραωθ μαρεχθινααμαρζα μαριβεωθ· μὴ μου παρακούσης νεκύδαιμον (τῶν ἐντολῶν καὶ τῶν ὀνομάτων ἀλλ' ἔγειρον μόνον σεαυτὸν ἀπὸ τῆς ἐχούσης σε ἀναπαύσεως) ὅστις ποτε εἰ (εἴτε ἄρρης εἴτε θήλυς) καὶ ὕπαγε εἰς πάντα τόπον εἰς πᾶν ἄμφοδον εἰς πᾶσαν οἰκίαν

372 κατάσχεσ αὐτῆς τὴν βρώσιν καὶ τὴν πόσιν (καὶ) μὴ ἐάσης τὴν δείνα ἄλλου ἀνδρὸς πείραν λαβεῖν (πρὸς ἡδονήν, μηδὲ ἰδίου ἀνδρὸς) εἰ μὴ ἐμοῦ μόνου τοῦ δείνα

ἀλλ' ἔλκε τὴν δείνα τῶν τριχῶν τῶν σπλάγχχνων (τῆς ψυχῆς)

378 πάση ὥρα

379 ἔλθη πρὸς ἐμὲ τὸν δείνα καὶ ἀχώριστός μου μέινῃ ἡ δείνα.

ποιήσον κατάδησον εἰς τὸν ἅπαντα χρόνον τῆς ζωῆς μου καὶ συνανάγκασον τὴν δείνα ὑπουργὸν εἶναί μοι τῷ δείνα καὶ μὴ ἀποσκιρτάτω ἀπ' ἐμοῦ μίαν ὥραν τοῦ αἰῶνος· εἴν μοι τοῦτο τελέσης ἀναπαύσω σε ταχέως.

TABLET

κατάδησον Ἑρῳνοῦν ἣν ἔτεκεν Πτολεμαῖς ἐμοῖ Ποσιδωνίῳ ὃν ἔτεκεν Θσενουβάσθις ὅπως μὴ βεινηθῇ μὴ πυγισθῇ (μὴ λεικάσῃ) μηδὲν πρὸς ἡδονὴν ποιήσῃ ἄλλω ἀνδρὶ εἰ μὴ ἐμοῖ μόνω Ποσιδωνίῳ ἵνα μὴ δύνηται Ἑρῳνοῖς μὴ φαγεῖν μὴ πείν μὴ στέργειν μὴ καρτερεῖν μὴ εὐσταθεῖν μὴ ὕπνου τυγχάνειν ἐκτὸς ἐμοῦ Ποσιδωνίου ὅτι ὀρκίζω σε (looks like rehandling of Pap. form: μὴ λ. might be original and omitted by accident from Pap. μὴ repeated suits this style, but the μήτε, μήτε, μὴ, μὴ, μὴ of the Pap. gives a more elaborate effect, and the aorists help the crescendo)

κ. τ. ο. τ. φ. κ. τ. οὗ ἡ γ. ἀκούουσα τὸ ὄνομα ἀνοίγεται οὗ οἱ δ. ἀκούοντες τὸ ὄνομα ἐμφοβοὶ τρέμουνσι (either ἐμφοβοὶ or ἐνφύβου might be right) οὗ οἱ ποταμοὶ καὶ (θάλασσαι ἀκούουσai τὸ ὄνομα ἐμφοβοὶ φοβοῦνται, οὗ) αἱ πέτραι ἀκούουσai τὸ ὄνομα ῥ. (Here the tablet has preserved words essential to sense; ῥήσσονται is appropriate to πέτραι not to ποταμοί. The parallel in P. Leid. V, col. vii, 31 (p. 808, Dieterich) suggests that the true reading is πῆγγυνται where the tablet has φοβοῦνται: a shorter parallel P. Oslo., I, 262-3)

ὅ. σε νέκυσ δαίμων (ὅστις ποτ' εἶ) (perhaps rightly) εἶ. ἀ. εἶ. θήλια κατὰ τοῦ βαρβαραμελουμβρα βαρουχαμβρα (ἄδωναίου) καὶ κατὰ τοῦ αβραθαβρασας σεσενγενβαρφααραγγη καὶ κατὰ τοῦ ιαω, ιωα (πακεπτωθ πακεβραωθ σαβαρβαριαωθ) μαρει ἐνδόξου καὶ κατὰ τοῦ μαρμαραιωθ (καὶ κατὰ τοῦ) μαρμαραωθ μαρμαρανωθ μαρμαραχθα ἀμαρζα μαρειβαωθ· μὴ μου παρακούσης νέκυσ δαίμων, ὅστις ποτὲ εἶ, καὶ ὕπαγε εἰς πάντα τόπον (καὶ) εἰς πᾶν ἄμφοδον (καὶ) εἰς πᾶσαν οἰκίαν. (Here the three extra *nomina* may be based on the common original, the big omission is clearly an error, the addition of (καὶ κατὰ τοῦ) very likely a misunderstanding, and the addition of καὶ twice later possibly an error in view of the frequency of anaphora in this style)

κ. αὐ. τὸν βρότον καὶ τὸν πότον, μ. ε. Ἑρῳνοῦν ἄ. ἀ. π. λ. εἰ μὴ ἐμοῦ μόνου Ποσιδωνίου ὃν ἔτεκεν Θ. (Perhaps the earlier form, though it might have arisen through omission)

ἔλκεται Ἑρῳνοῦν τ. τ. (καὶ) τ. σ. (αὐτῆς)

πᾶσαν ὥραν

ἔ. (Ἑρῳνοῦς) καὶ ἀδιαχώριστόν μου αὐτὴν ποιήσης (μέχρι θανάτου). (Due to a desire for absolute precision?)

ἵνα ἔχω αὐτὴν Ἑρῳνοῦν, ἣν ἔτεκεν Πτολεμαῖς ὑποταγμένην ἐγὼ Ποσιδωνίῳ ὃν ἔτεκεν Θσενουβάσθις εἰς τὸν ἅπαντα χρόνον τῆς ζωῆς μου· ἥδη ἥδη ταχύ· εἴαν τοῦτο μοι ποιήσης ἀπολύσω σε.

¹ = away from me (there is no need to supply μετ' before ἐμοῦ).

² μαρι as a magic name also Delatte, I, 581. 14.

The writer of the tablet has not given us the second half of the spell, with the characteristic Egyptian "For I am Barbar Adonai that concealeth the stars, the bright ruler of heaven, the lord of the universe," followed by a repetition of *ἄξον, κατάδησον* with special detail¹. His text, though perhaps a century older than the papyrus, is on the whole much inferior: it belongs to the general category of unprotected texts, and we may assume that far more care was spent on transcribing papyri for magicians' use than on texts for clients. At the same time, the tablet supplies at least one omission in the papyrus, and points to a common original earlier than itself. It throws not a little light on the tradition of magic texts, and similar discoveries are much to be desired².

¹ Cf. *P. Oslo.*, I, 82 f.; *Dem. mag. pap.*, XXI, 42. The *ἐξαίτησις τῆς πράξεως* which follows is something to be done by the magician, not part of the *λόγος* to be inscribed on the lead tablet.

² Preisendanz, *Gnomon*, II, 192 mentions a Berlin duplicate text (not, as this, a copy for practical purposes).

SOME WOODEN FIGURES OF THE EIGHTEENTH AND NINETEENTH DYNASTIES IN THE BRITISH MUSEUM. PART I

By H. R. HALL

With Plates xxxviii-xli.

Of the wooden figures of which photographs are here published as plates the most important as a work of art is No. 32767, formerly in the Blacas Collection, acquired in 1867, the naked young girl with earrings and hair in hanging plaits, bearing a carved wooden four-legged chest on her head (Pl. xxxviii). This is one of the finest existing works of the sculptor in wood at this period. It is classed by M. Capart among the *chefs-d'œuvre* of Egyptian art (*Documents pour servir à l'étude de l'art égyptien*, 31, Pl. 44). It is of the latter half of the Eighteenth Dynasty. To enlarge upon the truth and grace of this little figure would be unnecessary: the photographs are enough. The way in which the body is shown bending slightly forward is extraordinarily true to nature. Though her face is slightly damaged, the end of the nose being rubbed away, it is quite a charming child's face that looks at us from under its burden. She wears nothing but a pair of broad bracelets above the wrist and a huge pair of wheel-rosette earrings with part of the rings passing through the lobes of her ears, the rosette decoration within the rings being below them. Her hair is dressed in three rather skimpy pigtails, one on each side in front of the ear and one at the back, which are very realistically represented. She holds the chest by one of its legs with her right hand, which is preserved, but unluckily the arm from shoulder to wrist was not, and has had to be restored, not over-skilfully, in modern times. The feet are also partly restored, and the base is modern. There is a long crack down the left side of the figure, but the wood is perfectly sound and in good condition. The chest has cracks and part of the rim is broken away in one place. It has a conventional decoration of carved petals, well known in the 'Amarnah period. The figure no doubt dates from the end of the reign of Amenophis III, about 1380 B.C. It is $5\frac{1}{2}$ in. (14 cm.) tall, without the modern stand.

No. 32733, Pl. xxxix, figs. 1-3, a figure of a naked girl with her right hand putting a tress of her hair or wig back over her right shoulder, while in her left hand she holds a tiny kitten, is also very charming, but has none of the art of No. 32767. Though the face is pretty, and though the gesture of putting back the hair is very unusual in a statuette, the figure is dry and formal in execution: even the hair is put back stiffly and falls in a very ordered disorder over the shoulder. The arms, too, are poorly and thinly designed. And yet, though inferior, it has more charm than the figures I shall next describe. There is on the top of the head a broken-off modius-like lump, cut hollow, with two crossing holes through it from front to back, which were perhaps intended for the fixing of some object borne on the head that has now disappeared. The hair is formally treated, and bound round the forehead with a broad riband. The feet of 32733 were originally in separate pieces, joined on: they have disappeared. Its wooden stand is modern. The height of the figure is $5\frac{1}{4}$ in. (13.4 cm.). It also is of the latter part of the Eighteenth Dynasty. It belonged formerly to the Hay Collection, acquired in 1868.

Another figure of a naked girl of the same period is No. 32741 (Pl. xl, figs. 2, 3),



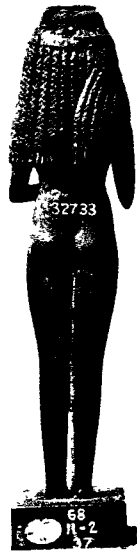
Wooden figure No. 32,767 in the British Museum. *Scale $\frac{1}{4}$.*



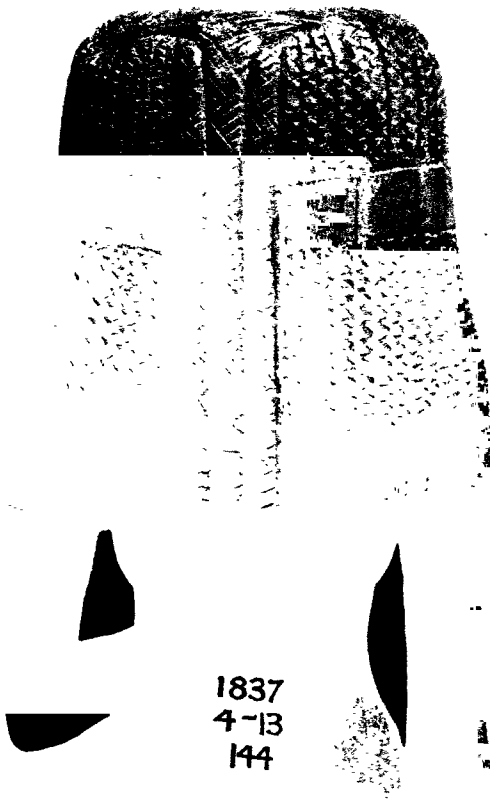
1



2



3



4



5

Wooden figures in the British Museum.

1, 2, 3 No. 32,733. *Scale c. 1/2.*

4, 5 No. 2375. *Scale of fig. 5 c. 1/4.*



Wooden figures in the British Museum.

1. No 32,749. *Scale c. $\frac{1}{11}$.*
2 and 3. No. 32,741. *Scale c. $\frac{1}{11}$.*

depicting a maiden of less developed figure than 32767 but more mature visage, wearing neither hair nor wig on her head, and with a pair of big ear-studs through the lobes of her ears. Her skull is clean-shaven, showing a curious dome-shaped form that was evidently admired at that period and no doubt induced by art, as we see in the case of the deformed skulls of Akhenaten's daughters. At the back of the head, which is straightened off in a manner not intended to represent reality, is a round hole, corresponding to an oblong hole immediately below it between the shoulders; whether this was intended for the fastening of a detachable wig is uncertain, but it is very probable. The ear-studs are represented as of a large dumb-bell shape with circular, slightly convex heads, without pattern. The ears are large and prominent; the features well preserved but for a slight chip on the point of the nose. There is also a chip on the forehead. The upper arms, which were sharply bent at the elbow, are broken off; they were either jointed at this point or were broken, then mended and then broken again, to judge from the hollow cutting of the arm at the present break. She was originally carrying a tray of food or offerings, no doubt. The feet are perfect but for a couple of toes chipped. The rectangular stand is in one piece with the figure and measures $1\frac{1}{4}$ in. (3.2 cm.) long by $\frac{7}{8}$ in. (2.25 cm.) broad by av. $\frac{1}{2}$ in. (1.25 cm.) high; it is roughly cut and higher at the back than in front. The total height of the figure excluding the stand is $5\frac{5}{8}$ in. (14.3 cm.). This figure is of a harder and less sympathetic style than No. 32767; it has little charm, but is a fine example of the wood-sculpture of the time of Amenophis III. This again comes from the Hay Collection of 1868.

A fourth female figure (No. 32749, Pl. xl, fig. 1), also from the Hay Collection, and of the same period, is of a more cheerful countenance than 32741. The head is the most carefully cut part of this statuette, the rest of the figure being inferior in style to the others and rather clumsy. The face is that of a young girl with thick lips, probably with negro blood in her veins. Her head is not shaven, but the hair is cut short and is disposed in several little locks or plaits over the forehead. Like 32767, she wore a pair of big wheel-earrings, the gold wire of which is carefully represented in the only one which remains, that in her right ear; that in the left ear has been broken away, with part of the ear. The rings contain no rosettes as in 32767, but are evidently intended to be simple rings without further decoration. The back of the head, which is not deformed in any way, is sliced off as in 32741, and has a hole also; but in this case there is little doubt that the back of the head had to be made of a different piece of wood, fastened with a peg, which has gone.

The head and neck are of a separate piece from that of the rest of the figure, to which they are carefully joined with a semicircular fit that gives the effect of a necklace. The left arm is crossed across the stomach; the hand, broken, originally held a sistrum or other object. The right arm is pendent, its hand complete and clasped. This figure differs from the two others in wearing a hip-band of several strands of beads, with oval or semicircular spacers, carefully represented. There are traces of black paint on the eyes, hair, and pubes. The legs are complete, the left slightly in advance of the right; the left foot has been broken and rejoined. The figure stands at one end of its original oblong pedestal, which is $5\frac{1}{8}$ in. (13 cm.) long by $2\frac{1}{4}$ in. (5.7 cm.) broad by 1 in. (2.5 cm.) high; without this it stands $8\frac{7}{8}$ in. (22.5 cm.) high.

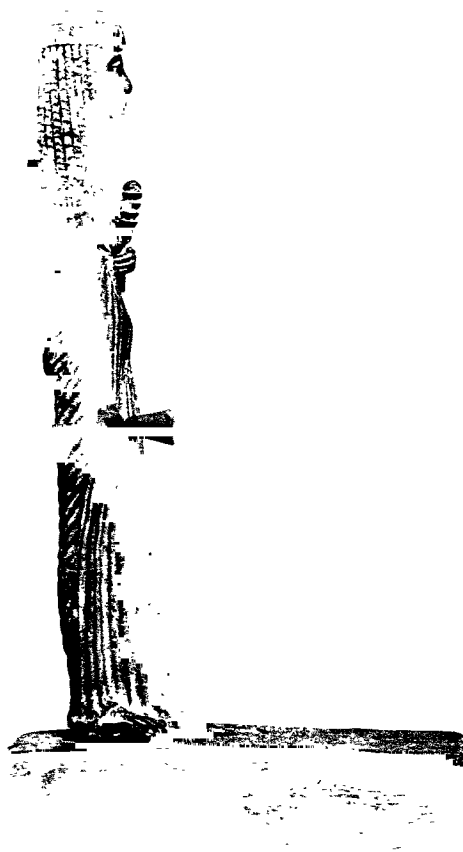
The fifth female figure (No. 2375, Pl. xxxix, figs. 4, 5) is considerably split and cracked, without however detracting much from its effect. It depicts a priestess, probably a singer of Amūn, clad in a very close-fitting and diaphanous robe reaching to the ankles, and wearing a heavy wig of curls, bound with a broad band (no doubt of gold) at the level of the ears, and with three pendent plaits at the back, of the same length as the rest,



1



2



3



4

Wooden figures in the British Museum.

1 and 2. No. 2376. Scale $c. \frac{1}{4}$.

3 and 4. No. 32,772. Scale $c. \frac{1}{4}$.

A FRAGMENT OF ACCOUNTS DEALING WITH RELIGIOUS FESTIVALS

By F. WORMALD

In 1928 the British Museum was fortunate enough to acquire the papyrus which is here printed for the first time. It was bought at Medinet-el-Fayyûm from natives of Behneseh in 1928 and then acquired by the Museum as part of its share of a joint purchase with other bodies. The papyrus consists of a single column of payments made to various people and for various things. From the nature of the text it appears that it is part of the accounts of some body of people; it has been suggested that it might be a "Kultverein" (but this theory is rather unlikely), and the payments which are made are in connexion with two festivals, one of which is of Sarapis. Originally the papyrus must have been considerably larger. This can be demonstrated by examining the writing on the verso, which contains fragments of accounts of a later date. In relation to the recto of the papyrus these accounts are written upside down, and as they begin on the verso of the left margin of the column on the recto, they show that the present left side of the recto was not the original limit of the papyrus. The present condition of the papyrus is not very good and the lacunae thus caused are irritating; nearly all the beginnings of the words indicating to whom the payments were made are gone on the left-hand side (only in ll. 4-10 and 23-28 is the margin preserved), while the whole of the right-hand side which contained the payments has completely disappeared. Line eleven is the only payment which remains, and that forms a single line and is placed well in the middle of the papyrus. The hand, which is of the late third century A.D., is clear and good. The text is as follows:

- | | |
|------|--|
| (1) | [ύ(περ) λη]μμάτων ἐνεχ(θέντων) καὶ ύ(περ) ι[|
| (2) | [. . .]γυσίων τῶν κυρ[ω]θ[έντων |
| (3) | [. . .]κλαρίω [ἐ]λθόντι ἐκ [|
| (4) | ύ(περ) ύπολόγω [|
| (5) | κ[ήρ]υκι ὁμοίως [|
| (6) | σαλπικτῇ ὁμοίως [|
| (7) | αἵματος μόσχου [|
| (8) | ῥηρωνι ὁμοίως [|
| (9) | Σφόνγω ὁμοίως [|
| (10) | κωμφῶ ὁμοί(ως) [|
| (11) | /ε, — < τπ Lνε — [|
| (12) | [τ]οῖς Σαραπείοις ὁμοί(ως) νομ [|
| (13) | [σ]υνθηθείας ὁμοίως [|
| (14) | ἀνολόγω ὀρχηστοῦ [|
| (15) | [.]ηραρίω ὁμοί(ως) [|
| (16) | [Ἄ]μοιτᾶ εἰς σὺλ[.]ιμου [|
| (17) | [ῥ]ρωνι τειμή[ματο]ς [|
| (18) | πανκλυστῇ [|

- (19) [θυρ]ωρῶ Σαραπείου []
 (20) [Σαραπ]ίωνι καὶ Ἀμοιτᾷ πανκ[ρατιασταῖς]
 (21) [ἀλ]πταις ᾗ τιμῆματος []
 (22) [κ]ωμῶδῶ ὁμοί(ως) []
 (23) κήρυκι ὁμοίως []
 (24) ξένια κυνόπου []
 (25) ἀνδρεοκαταμάκτη []
 (26) ὁμηριστῇ τιμῆ(ματος) []
 (27) τῷ τοῦ ἐρχήστου δραματοθ []
 (28) ἀναγνωστῇ Σαραπᾷ []
 (29) ἀλλ[ῶ] ὁμηριστῇ []
 (30) . . . γύλλω τιμῆ(ματος) []

2. ?[Διο]νυσίων. 4. l. ὑπολόγου. 14. l. ἀναλόγῳ. 17. l. τιμῆματος. 20. l.
 παγκρατιασταῖς. 21. l. ἀλείπταις. 24. l. κυνόπου. 29. ἀλλῶ: Nock.

Translation.

- (1) For receipts in hand and for []
 (2) . . . of the ratified . . . []
 (3) . . . -clarius coming from []
 (4) As a deduction []
 (5) to a herald similarly []
 (6) to a trumpeter similarly []
 (7) calf's blood []
 (8) to Hero similarly []
 (9) to Spongus similarly []
 (10) to a comedian similarly []
 (11) total 380 drachmae less 55 drachmae 1 obol []
 (12) For the feast of Sarapis similarly []
 (13) For a gratuity similarly []
 (14) Dancer's salary []
 (15) to — similarly []
 (16) to Amoitias for — []
 (17) To Hero for estimated allowance []
 (18) To a rubber down []
 (19) To the doorkeeper of the temple of Sarapis []
 (20) To Sarapion and Amoitias pancratiasts []
 (21) To 3 trainers for estimated allowance []
 (22) To a comedian similarly []
 (23) To a herald similarly []
 (24) Gifts of the dog-headed one []
 (25) To him who rubs down in the men's quarters []
 (26) To a homerist for estimated allowance []
 (27) To the — of the dancer []
 (28) To a reader Sarapas []
 (29) To another homerist []
 (30) To -yllus for estimated allowance []

NOTES: (a) 1. 2. It is suggested that *Διονυσίων* might be a possible reading for the first word of this line. It would certainly fit in, but there is no evidence in the text, which would indicate it as a certain reading.

(b) *τίμημα* in lines 17, 21, 26, 30 has apparently that particular meaning which is attached to it in P. Grenf. II, 67, 12, namely that of an estimated allowance in the payment for something done. In the Grenfell papyrus it is a sum paid over and above the salary contracted for. In the present text however it may merely mean a salary which has been contracted for beforehand and also a sum estimated probably to include the expenses of the journey. Supporting this last statement it should be noticed that all the payments to which the word *τίμημα* is applied are made to people who were in all probability brought in from outside.

Having given the text in full with an attempted translation, something must be said as a commentary upon this puzzling document, which abounds in obscurities. The nature of the papyrus is clear: it is a portion of a series of accounts for certain festivals celebrated at Oxyrhynchus. These accounts contain payments made to people who took part in the festival, for things used in the festival and for certain customary payments. At line eleven the text divides into two parts; it is a summary of the previous account, and line twelve starts the second account, which contains expenses for the festival of Sarapis. Unfortunately neither text is complete, the first having no longer a beginning and the second no longer an end. There is however enough left for one to recognize the general similarity of the document to P. Oxy. 519 and 1050. Both these papyri are accounts for games at Oxyrhynchus and in a few cases the items are the same as in the present text. At the same time it must be borne in mind that both these texts have a distinctly secular tinge, whereas this present document can definitely be connected with a religious cult.

As yet the exact interpretation of the first eleven lines is mysterious and unsolved. It seems clear that the first three lines are some sort of recapitulation of that portion of the document which immediately preceded the column which forms our text, and give the amount of receipts in hand. Who they were ratified to or by remains a mystery. At line four a deduction from these receipts in hand is made. Tempting as the theory is to make the 55 drachmae 1 obol the amount of the deduction and the 380 drachmae the sum of the receipts in hand, Professor Hunt remarks that the 55 drachmae 1 obol is too low an amount at the date at which the papyrus was written, added to which a *κωμῳδός* was an expensive person to hire. These deductions consist of payments made to various people who took part in the feast and of a puzzling entry on line seven, which as yet remains unexplained. Something more than the sacrifice of a calf must be implied, since the ordinary entry would be merely a calf without any other additional specification. For the remaining items in this portion of the text the explanation is simple. Lines five and six are payments made to people who would take part in any festival; the herald is indeed the complement to the trumpeter. In connexion with these two entries there is an interesting comparison to be drawn with P. Oxy. 519, where these two officials again appear in conjunction with one another. For the remaining items in this section, lines eight, nine and ten, it seems safe to assume that they are payments made to performers in the games which frequently accompanied the festivals. Papyri show that in many cases these performers were hired from outside and were brought in to add secular gaiety to either civil or religious solemnity¹. Hero and Spongos are probably of this category, and it should be noted that a *κωμῳδός* may mean a man who can do some sort of a "turn."

Line twelve introduces what remains of the second account. The items of it are payments made to people who took part in, or, as in the case of line sixteen, may have supplied something for, the festival of Sarapis. As in the previous account we find that the religious

¹ Cf. Oxy. 731, 1025; Lond. 331; P. Flor. 74.

side of the feast was accompanied by secular, athletic and dramatic performances. Athletics are indicated in lines twenty and twenty-one, where we find payments made to two pancratiasts and three trainers. Dancing also, which is found in papyri in connexion with festivals, occurs in lines fourteen and twenty-seven, although the exact meaning of the latter line has not yet been determined. Dramatic performers on this occasion were a *κωμωδός*, two homerists and a reader in lines twenty-two, twenty-six, twenty-eight and twenty-nine; we may add to these the items in lines seventeen and thirty, which probably indicate performers brought in from outside¹. For the remainder of the entries it may be said that they represent the ecclesiastical side of the festival; in the main they are comparatively simple, with the exception of lines eighteen and twenty-five, which are apparently payments made to certain officers, who probably looked after the office of purification which in many cases accompanied these festivals. In both of these lines, however, the translation is a tentative one. Strange as the payment to an official of the temple of the god whose feast is being celebrated may appear, it is yet in perfect order with the administration of the Egyptian temples. On this occasion the doorkeeper probably took the "door"² and may have been given something extra in compensation for the extra work occasioned by the festival and games combined which would attract more devotees than usual to the sacred precincts.

One line remains to be explained and it is of extraordinary interest; line twenty-four *ξένια κυνόπου*. The word *κυνόπης* is rare in papyri and indeed elsewhere. Preisigke does not give it in his *Wörterbuch*, and the only other occurrence of it in papyri has been brought to my notice by Mr. A. D. Nock, who has been kind enough to send me numerous references which have been of great assistance in the writing of this article. In an interesting magical papyrus text in Pap. Brit. Mus. xlvi, line 256 there is a statement that the blood of the black dog-headed one (*τὸ αἷμα τοῦ μέλανος κυνώ(π)ου*) shall be shed³. Almost certainly the reference is to the god Anubis, the dog-headed guardian of Osiris. Anubis was certainly well known as *κυνοκέφαλος*⁴. Apuleius in the famous chapter of the *Metamorphoses* where he describes the Isiac festival records of Anubis as follows: "First came the dread envoy that goes between the lords of heaven and of the nether world, even Anubis. Lofty of stature was he and his face seemed now to be black, now golden bright: High he held his dog-like neck⁵." It seems possible therefore that the *ξένια κυνόπου* of our text are some sort of remuneration given to the official who took the part of Anubis in the festival. Remuneration seems more likely than a mere salary which would probably be indicated by *κυνώπη*. In conclusion to these remarks on this puzzling text, I should like to say how much I am indebted to Mr. Bell who first suggested that I should edit this papyrus and who has borne with patience and infinite kindness my constant importunities. Professor Hunt and Mr. A. D. Nock have also seen the text and made some very useful suggestions for which I am duly grateful.

¹ Cf. Note (b) above.

² Cf. W. Otto, *Priester u. Tempel im hellenistischen Ägypten*, I, 395 ff.

³ Cf. K. Preisendanz, *Papyri Graecae Magicae*, I, 180-198.

⁴ The following are a few references to Anubis in his capacity as the dog-headed one. The majority will be found in Th. Hopfner, *Fontes Historiae Religionis Aegypticae*. (1) Antonius, *Carm. adv. Gentes*, VI, 25, cf. Migne, *Pat. Lat.* v, 273. (2) Apuleius, *Metamorph.* XI, 11. (3) Arnobius, *Disput. adv. Gentes*, VI, 25. (4) Augustine, *De Civitate Dei*, II, 14; III, 12. (5) Cyprian, *Ad Demetrium*, 12; *Carm.* IV, 32. (6) Diodorus Siculus, *Βιβλιοθήκη ιστορική*, I, 87. (7) Firmicius Maternus, *De errore profanae religionis*, 2, 3. (8) Lucan, *Carm. Apotheosis*, 194-196. (9) Minucius Felix, *Octavius*, 2, 22. (10) Proclus, *In Rempublicam*, 417. (11) Prudentius,

⁵ Cf. H. E. Butler's translation, II, 136.

PAPYRUS SALT 124 (BRIT. MUS. 10055)

By JAROSLAV ČERNÝ

With Plates xlii–xlvi.

Papyrus Salt 124 in the British Museum, which is now numbered 10055, belongs to the old acquisitions of our science. It came into the collections of the Museum at the beginning of the last century along with the considerable collection of Henry Salt, but remained unknown until 1870, when Chabas published a poor hand-copy of it provided for him by Birch, together with a translation and a short discussion¹. This is the first and the last appearance of the papyrus in Egyptological literature. Interesting as were both its grammar and its contents, its influence was restricted to a short summary given by Erman by way of a description of the life of the Egyptian workmen² and to a certain number of quotations in the *Neuägyptische Grammatik* of the same scholar, who, however, apparently worked only with the facsimile published by Chabas. Spiegelberg studied the original afresh, but owing to the bad preservation of the papyrus, he did not venture to publish more than a partial translation and a new summary³. Of the rest, Gardiner finally copied it for the Berlin Dictionary but neither his transcript nor his translation are available for general use.

When I interested myself in the workmen of the Theban Necropolis, it soon became apparent to me that no improvements on the text were possible without consulting the original. Accordingly I made a careful copy in 1924, and re-collated this in 1928, this time having the valuable help of Professor H. O. Lange, who was working in the British Museum at the same time with myself, and who kindly corrected one or two mistakes I had made in my transcription⁴. It was he who insisted that I should republish the papyrus, a task I undertook only after I found that I possessed illustrative material—perhaps inaccessible to others—needed to elucidate some of the difficulties presented by the text, and after Professor Gardiner, with his well-proved kindness, put at my disposal his own copy, which assured the correctness of my readings. I have also had the advantage of corresponding about the translation with Professor Lange and have obtained from him several valuable criticisms. I am very much indebted to Professors Lange and Gardiner, as well as to Dr. Hall for permission to study the papyrus and to publish it in this *Journal*. I do not imagine that my text is final, as there are a few points where I failed to decipher the original, but I hope that it will at least afford to students the possibility of improving on my translation.

The papyrus, which is now mounted under glass, measures 38 cm. in height by 62 cm. in length and consists of three sheets gummed together. The gummings are at

¹ Chabas and Birch, *Plainte contre un malfaiteur d'après un papyrus hiéroglyphique du Musée Britannique* in *Mélanges égyptologiques*, III série, tome I, 1870, 173–201.

² Erman-Ranke, *Ägypten und ägyptisches Leben im Altertum*, 142–3.

³ Spiegelberg, *Arbeiter und Arbeiterbewegung im Pharaonenreiche unter den Ramessiden*, Strassburg, 1895, 11–15.

⁴ The improvements which are due to Professor H. O. Lange are expressly stated as such in the notes on the transcription.

distances of 12 and 40 cm. respectively from the right edge of the recto of the papyrus. Thus the first sheet is 12 cm. long, the second 27 cm. and the third 23 cm. The central sheet is complete and we may perhaps assume that the other two were originally of the same size, *i.e.*, 27 cm. in length. If so, the third must have lost about 4 cm. on the left, which were probably cut off as blank in mounting the papyrus under glass. This, however, cannot be proved, though some loss on the right edge of the first sheet is beyond all doubt. If my reasoning be right and the loss from this sheet be about 15 cm., this would confirm my reconstruction of the missing beginnings of the lines of the first column of the recto.

The papyrus contains four columns, two on each side. The first column of the recto is incomplete, there being evidently something missing on the right edge. This column has 21 lines, but at least one line is lost at the end, as is shown by the context. Besides this, the last still existing line, the 21st, has considerable lacunae. The second column of the recto had 22 lines, the last of which is badly damaged. The first column of the verso has 17 lines, but the last of them has two lacunae, and it is not quite certain that a further short line is not lost. The second column of the verso, with 7 lines, is intact and covers only the upper part of the papyrus, the rest of the page having been left blank.

The length of the lines varies considerably, short lines being unusually numerous. In the first column of the recto, so far as preserved, it varies between 5 and 27 cm., in the second the length is about 30 cm. In the first column of the verso the shortest line (l. 1) measures 20 cm. and the longest (l. 17) 35 cm.: the average length of the lines in the second column of the verso is about 11 cm. The top of the recto corresponds to the top of the verso.

The papyrus seems to be very thin. It is of a yellowish brown colour, rather dark, and as the ink is relatively pale, it is sometimes difficult to distinguish it from the background and from the fibres of the papyrus.

The writing is bold and has good forms. Ligatures are rare and the only cursive groups are those for the words *rmṯ* and *ḥnḥ-n-nw.t*. The abbreviating strokes \searrow are found in $\frac{\text{Q}}{\text{I}} \text{ } \frac{\text{L}}{\text{I}}$, and sometimes in the conjunctive *mtw.f* and in the word *sm.t*. While the script is good, the style is very bad. The orthography of the papyrus is that used in the beginning of the Twentieth Dynasty, and the only errors committed by the scribe are one or two omissions of prepositions.

Even if we had no other indications, I should date the papyrus, by its script, to the borderline of the Nineteenth and Twentieth Dynasties, or in the first half of the reign of Ramesses III at the latest. There are, however, internal indications which, combined with what we know from elsewhere, enable us to determine the age of the papyrus with more certainty. But this point is better deferred until I have given the translation of the document.

TRANSLATION. (See Pls. xlii–xlvi.)

Recto, page 1.

(1) [*The workman*] *Amennakht* [*says*]¹:

I am the son of the chief-workman Nebnūfer. My father died (2) [*and the chief-workman*]² *Neferhotep, my brother, [was put] in his place. And the enemy*³ *killed Neferhotep* (3) [*and (although) I am (?)*]⁴ *his brother, Penēb gave five servants of my father to Prēmḥab who was then Vizier* (4) [*and he put him in the place*⁵ *of ?*] *my father, although, indeed, it was not his place. And when the burial of all the kings*⁶ *was made,* (5) [*I reported* (??)]

Penēb's theft of the things of King Sety Merenptah. The list of them: (6)storehouses of the king Sety Merenptah, which were found in his possession after the burial.

(7)and he took away the covering (?)⁷ of his chariot. They cut the hand of⁸ (8) the scribe, though (?) he took it at the burial. (9) [.....the five.....] of the doors. And they found the four (of them), but he took away the one. It is in his possession.

(10)[And he stole the] incense of the ennead of gods of the Necropolis and he divided it between himself and his fellows.

(11)of inb-oil⁹ of Pharaoh and he took away his wines and sat (12) [on the sarcophagus(?) of] Pharaoh¹⁰, although he was buried.

(13)[one]¹¹ statue of the Lord having upon it the name of Sety Merenptah and they took themselves off¹² and they were seen

(14)in(?) the temple of Hathor, and the scribe *Kenherkhepeshef* confirmed what he had committed in the temple of Ptah, and Penēb (15)[chief-work]man *Neferhotep*. And he hacked up¹³ the ground which is sealed¹⁴ in the Place which is hidden¹⁵.

(16) [And yet he took the oath] *sdḏ* tr¹⁶, saying, I did not upset a stone in the neighbourhood of the Place of Pharaoh; so said he.

(17) [Charge concerning his]¹⁷ going to three(?) tombs(?)¹⁸ and he stretched his legs¹⁹, although they(?) were not his. He was with the workman *Kenna*.

(18)[and] Penēb gave something to the [scribe]²⁰ *Kenherkhepeshef* and he took it out.

(19) [Charge concerning his robbing(?) *Yeyemw*]²¹ of her garment and he threw²² her on the top²³ of the wall and violated (?) her.

(20) [Charge concerning] his venting his spleen (??) upon²⁴ the workman *Nebnūfer*, son of Pennub, saying: Bring lamps (21)going with.....fishermen. And he.....

Recto, page 2.

(1) Charge²⁵ concerning this²⁶: His son fled before him to the place of the door-keepers and took an oath by the Lord, saying: I cannot bear with him²⁷, and he said: (2) Penēb debauched the citizeness *Tuy*, when she was wife to the workman *Kenna*, he debauched the citizeness *Hunro*, when she was with *Pendua*, (3) he debauched the citizeness *Hunro*, when she was with *Hesysenēbef*; so said his son. And after he had debauched *Hunro*, he (4) debauched *Webkhet*, her daughter, and *Apahte*, his son, also debauched *Webkhet*.

(5) Charge concerning his ordering to the workmen to cut stones on the top of the work²⁸ of Sety Merenptah. They (6) took (them) away to his tomb every day and he erected four columns in his tomb of these stones.

(7) And he plundered the Place of Pharaoh²⁹. The people who passed near by in the desert³⁰ saw (8) the stone-cutters, when they were standing working on the top of the work of Pharaoh, and they heard voices. And he (9) took away the pick-axes³¹ of Pharaoh and the hoe³² for the work in his tomb.

List (10) of the stone-cutters who worked for him: *Apahte*, *Kasa*, *Kasa*, son of *Ramose*, *Haremuia*, *Kenherkhepeshef*, (11) *Rome*, *Pashed*, son of *Hah*, *Nebnakht*, *Nakhtmin*, *Nebsmen*, *Haremuia*, son of *Beky*, (12) *Khons*, *Nakhtmin*, *Piōm*, *Wennūfer*, *Anakht*, total 16.

(13) Charge concerning his carrying off the large chisel of the work³³ and breaking it in his tomb.

(14) Charge concerning his running after the chief-workman *Neferhotep*, my brother, although it was he who reared him. And he closed his (15) doors before him and he took a stone and broke his doors. And they caused (16) men to watch *Neferhotep*, because he said: I will kill him in the night, and he beat nine men in that night.

(17) *And the chief-workman Neferhotep brought a complaint against him before the Vizier Amenmose and he inflicted punishment upon him. And he brought a complaint against the Vizier (18) before Mose, and he had him dismissed from the office of Vizier, saying: He has chastised me.*

(19) *Charge concerning his ordering to the workmen to work on the plaited bed of the deputy of the temple of Amūn, while their wives (20) wove clothes for him³⁴. And he made Nebnūfer, son of Wazmose, feeder³⁵ of his ox for two whole months.*

(21) *Charge concerning his saying to the chief-workman Hay: I will attack you on the desert and kill you.*

(22) *Charge concerning his.....which was among them(?). [And he]*

Verso, page 1.

(1) *cursed³⁶ a tomb on the west of the Royal Necropolis, which had³⁷ a stele. (2) He went down into the tomb of the workman Nakhtmin and stole the bed (3) which was under him. He carried off the objects which one gives³⁸ to a dead man³⁹ and stole them.*

(4) *Charge concerning his keeping on continually beating the workmen at a night-party⁴⁰.*

(5) *And he went on the top of the walls and threw bricks on the people.*

(6) *Charge concerning his taking an oath by the Lord, saying: If I cause⁴¹ the Vizier to hear my name again, he will be dismissed (7) from his office, but I shall become (again) stone-cutter, so said he. His son did likewise, saying: He (i.e., the Vizier) (8) steals and does not leave (anything) in the Royal Necropolis. And see, he would in no way cease to utter his blusterings⁴².*

(9) *Charge concerning his taking away a large pick-axe⁴³ for splitting stones. And when they said: It is not there⁴⁴, and spent (10) one whole month by making search for it, he brought it and left it behind a large stone.*

(11) *Charge concerning his going to the burial of Henutmīrēr⁴⁵ and taking away a sr-goose⁴⁶. (12) And he took an oath by the Lord concerning it, saying: It is not in my possession, but they found it in his house.*

(13) *Charge concerning his causing me to swear that I should be kept afar from the hnw⁴⁷ of my mother and my father, (14) saying: I will not enter therein. And he sent the workman Pashed and he began to cry (15) (in) the village, saying: Let no one look at anyone of the family of the chief-workman Nebnūfer, (16) when he goes to bring offerings to Amūn, their god; so said he. And when the people went to bring offerings (17) [on the] side.....they feared him and he began to throw stones on the servants of the village⁴⁸.*


Verso, page 2.

(1) *Nay, but (such conduct) is indeed unworthy of this office. (2) Ah! he is keeping well⁴⁹ (3) (though) he is like a mad (?) man⁵⁰. (4) And (yet) it was he who killed those men (5) that they might not bring message to Pharaoh. (6) Lo, I have caused the Vizier to know (7) about his manner (of life).*

NOTES.

1. (1. 1.) Restore [𓂏 𓂏 𓂏 𓂏 𓂏]. For the old neuter past relative form *dd-tn* introducing letters cf. Pap. Louvre 3230, 2. 1 (*Journal*, XII, 73), Ostr. Berlin 11247, 1, and especially Abbott, 5. 21, where it stands at the beginning of a letter containing a complaint and addressed to the Vizier as in our papyrus. The title of Amennakht could only be *rmt-is-t*, as he was member of a family of the Royal Necropolis workmen.

31. (2. 9.) On *hnr* cf. the note 43 below. The tools used in the work in the Royal tomb were the king's property (cf. also verso 1. 9-10).

32. (2. 9.) For *krđn* cf. Burchardt, *Altkananäische Fremdworte*, No. 934. The word appears in various spellings: 1. *krđn*, our passage, and *Urk.*, iv, 669; 2. *krđ*, Ostr. Brit. Mus. 5631, 5; 3. *kđn*, Ostr. Cairo 25509, verso; 4. *kđr*, , an unpublished Cairo ostr.

33. (2. 13.) *Rz-ε bskw* here again indicates the king's tomb: Botti-Peet, *Il Giornale della Necropoli*, Pl. 50, 1: Ostr. Petrie, No. 30, vs. 2, *p3 rz-ε bskw n nsu Wsr-m3ε-t-rε*, and Ostr. Gardiner, No. 59, 2, where the workmen in a letter inform the Vizier Neferronpet: "We are working *p3 rz-ε bskw ε3 n Pr-ε3* in the great work of Pharaoh." Cf. also the text of the Cairo Ostr. 25509, verso, from Bibân el-Molûk, note 43 below.

34. (2. 20.) *Nf*: It is difficult to say whether for the deputy or for Penēb.

35. (2. 20.) For *ws3 ihw* cf. Anast. II, 7. 5 and Ani, 8. 2; I owe these examples to Professor Lexa.


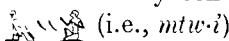
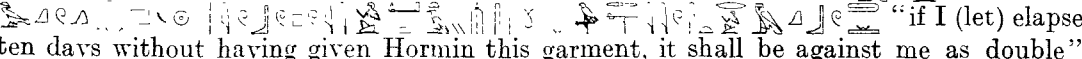
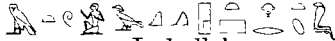


36. (vs. 1. 1.) On *wt3* cf. Gardiner, *Rec. trav.*, xxxiii, 89; to his reference add Amenemope, 11. 16 and Ostr. Cairo J. 49887, 5 (publ. *Ann. Serv.*, xxvii, 200-1).

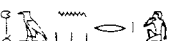
37. (vs. 1. 1.) For the preposition *r ihd* cf. Gardiner, *Hierat. Texts*, 37*.



38. (vs. 1. 3.) For *n3 ih-ut nt3 twtw hr d3t n rmt3 iw-f mwt* cf. Abbott, 4. 3: *n3i-w ih-ut n grg-pr nt3 twtw d3t-w n-w*.

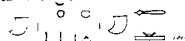


39. (vs. 1. 3.) Exactly like Coptic $\overline{\text{p}}\overline{\text{q}}\overline{\text{m}}\overline{\text{o}}\overline{\text{o}}\overline{\text{r}}\overline{\text{t}}$.

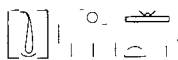
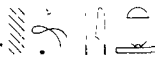
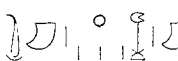
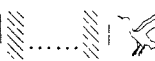

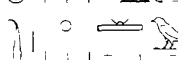
40. (vs. 1. 1.) *Smzi-t n grh* were, I imagine, night parties with the main purpose of eating and drinking beer, perhaps in connexion with certain feasts. Cf. Ostr. Cairo 25234, where we are told that on a feast of Amenophis I the workmen "exulted before him during three days of drinking with their children and their wives." For the expression *smzi-t n grh*, cf. *smzi n hrw nfr*, Anthes, *Die Felseninschriften von Hatnub*, 47. For *m dwn*, a particle, cf. Erman, *Neuägypt. Grammatik*, § 94, 2.



41. (vs. 1. 6.) The grammar of this, as of nearly all Egyptian oaths, is rather difficult. The starting point for the explanation of the passage is to me the obvious fact that  cannot be, as has been stated (e.g., Weil, *Die Veziere des Pharaonenreiches*, 118), the name of a Vizier, for such a proper name does not exist in Egyptian. For the translation which I suggest, we must suppose that either 1. *d3t* is inadvertently omitted by the scribe after *mtw-i*, or 2. it was not necessary to write it out, ellipses occurring very often in the Late Egyptian oaths. The second alternative seems to be more probable, for our present oath is not alone of its kind, there being others similarly constructed: Ostr. Petrie, No. 67: "As Amün lives and as the Ruler lives"  (i.e., *mtw-i*)  "if I (let) elapse ten days without having given Hormin this garment, it shall be against me as double" (i.e., I shall be obliged to give him two garments); Ostr. Turin, No. 9754, vs. (unpublished): "As Amün lives and as the Ruler lives"  "if I (let) Athyr elapse without having compensated (it) to Amenemōne, I shall be supposed to have taken it"; Pap. Turin, P.R. XLIII, 10:  "If I do not (let) a punishment be inflicted upon him" (*ih-tw* cannot be the infinitive which *tm* would require). In another oath known to me, however, the *d3t* is expressed (Ostr. Berlin 10655, 3 ff.):  "If I let the last day of the third month of summer season elapse without having given twenty (*deben*) of this copper to Amenemōpe, I am liable to one hundred blows and to pay double."

42. (vs. 1. 8.) This *hnr* is very probably identical with the similar word  of uncertain meaning attested in Sallier II, 14. 6=Anast. VII, 11. 5 (cf. Burchardt, *Altkanan-*


näische Fremdworte, No. 724). Unfortunately all the three passages do not suffice to establish the exact meaning of the word. For the equation  =  cf. the various spellings of other words *hnr* in Burchardt, *op. cit.*, Nos. 725-7.

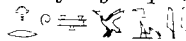
43. (vs. 1. 9.) The end of *hzi* and the word *ε* are a little doubtful, but the reading seems certain in view of  = , Ostr. Brit. Mus. 5631, 5 (*Inscr. Hier. Char.*, Pl. 18). *Hzi* or  *h* is probably identical with *hnr*, which also occurs in our papyrus (recto 2. 9). The word is very common in the documents of the Theban Necropolis. The above expression *hzi ε n swi inr* is perhaps also to be restored in the following passage of Ostr. Cairo 25509, vs.:

1. 1. ......
2. ......
3. .....blank .||
4. .....


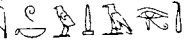
44. (vs. 1. 9.) *Bn sw*, a negative non-verbal sentence, is interesting. It is the new Egyptian equivalent of the old *nn sw*, which, however, did not really exist, as Gunn, *Studies in Egyptian Syntax*, 146, has observed. *Bn sw* qualifying the relative adjective *nti* is found, Botti-Peet, *Il Giornale della Necropoli*, Pl. 12, 4: *Inhrhεw pε nti bn sw*. Synonymous with *bn sw* is  *mn* in *is bw ir-k hr dd nf: mn*, Anast. v, 11. 6, "Didst thou not say to him: There is none?", or  *nn wn*, Anast. v. 16. 6=Sall. i. 6. 6. Perhaps, however, there is a difference in the use of *bn sw* and *mn*: *bn sw* refers to a special subject, already named or understood ("he is not"), while *mn* denies generally the existence of everything ("there is nothing").

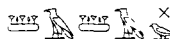
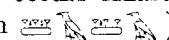

45. (vs. 1. 11.) *Hnw-t-mit-t-ε* was daughter of Sethos I (Gauthier, *Le livre des rois*, III, 33).

46. (vs. 1. 11.) *Sri-t* is very probably a Late Egyptian spelling of the old  *srw* (Dr. Keimer kindly informs me that there is at least nothing to contradict this identification) and occurs also elsewhere, e.g., Anast. iv, 15. 10 and Lansing, 12. 4. Doubtless it was a goose which belonged to the burial offerings, not a living bird, but a mummified one or a wooden model.

47. (vs. 1. 13.) *Hri pε hnw n tsi-i mw-t psi-i itf* must be a technical term for a special kind of oath, the exact wording of which is given by the following *bn εk-i im*. This seems also to be the opinion of Gardiner (*Zeitschr. f. äg. Spr.*, XLIII, 43, n. 1), who compares hesitatingly our *hri* with *hrw* in the oath , Pap. Bologna 1094. 10. 8. For *hnw* cf. the instances quoted, *Ann. Serv.*, XXVII, 194, and add Gardiner-Sethe, *Egyptian Letters to the Dead*, VIII, 23, n. (p. 24). Ostr. Hood enumerates as belonging to a property: *pr* ("estate"), *hnw, ε-t* ("house") and *mεhε-t* ("tomb"), and thus separating *hnw* from *mεhε-t* renders improbable my suggestion that *hnw* means "tomb-chapel." One possibility should be considered, namely, that the oath *hri pε hnw n tsi-i mw-t psi-i itf* is connected with what is said verso 1. 15-16. If so, *hnw* might be simply the chapel of the family's god (cf. *psi-w ntr*, vs. 1. 16).

48. (vs. 1. 17.) I can say nothing about the exact nature of the office of *bzk n pε dmi*.

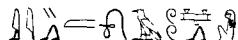
49. (vs. 2. 2.) *Wdz*  so written and determined in view of *wdε-t*, "Horus-eye." Cf. the spelling of *wdε* in the letter formula Pap. B.M. 10375, recto 9: .


50. (vs. 2. 3.) Šš written  occurs Anast. v, 7. 4 in an obscure and damaged context, and is perhaps identical with , Pap. Bibl. Nat. 237, frg. 5, 1. 2 (Spiegelberg, *Correspondances du temps des rois prêtres*, 90). Two more instances are found in the Pap. Brit. Mus. 10052, 3. 16 and 10. 8, where the word is determined with , which suggests some such meaning as "silly" or "mad."


COMMENTARY.

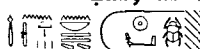
The papyrus contains a series of charges laid, as is clear from the concluding lines (verso 2. 6-7), before the Vizier. The expression *r ntī* recto 1. 1 shows that this has been done in the form of a letter. However, what we have is not the actual letter, but rather a mere copy or else the original composition which served as a basis for the actual letter to the Vizier. For such a supposition there are several reasons. Firstly it is highly improbable that such a letter would not have been introduced by a long address enumerating the numerous titles of the Vizier. It is true that Chabas supposed that this address had been written on a page which is now lost in front of the actual first column of the recto. But to this we may object that the titles of a Vizier were not long enough to fill an entire page. If my reasoning be correct, this rules out also the possibility that our papyrus was the actual letter, which, however, never reached the hands of the addressee. Moreover, had the Vizier received the letter, he would undoubtedly have filed it in his archives, which are, however, completely lost to us. We must imagine that the papyrus was found, like a considerable part of the Salt collection, somewhere near Dêr el-Medīnah, perhaps actually in the New Kingdom village of workers, the ruins of which cover the bottom of the valley of Dêr el-Medīnah. Somewhere here, in a hiding-place, the plaintiff hid the papyrus either in order to copy or have it copied later, or after having sent a copy to the Vizier.

Before we proceed to the chief person of our papyrus, Penēb, let us discuss briefly the person and the family of the plaintiff. He introduces himself at the very beginning of the document as Amennakht, son of the chief-workman Nebnūfer and brother of the chief-workman Neferhotep. The two last named are well known to us from both hieroglyphic and hieratic texts. The Theban tomb No. 216 situated at Dêr el-Medīnah belonged to *hri-is-t Nfrhṭp*, whose father was *hri-is-t Nbnfr*, and his grandfather another *hri-is-t Nfrhṭp*. To Nebnūfer and Neferhotep the elder belonged the tomb No. 6 which is just by the side of tomb No. 216. From the texts of these two tombs¹ we obtain the following genealogy of the family:

chief-workman Neferhotep + his wife 

chief-workman Nebnūfer + his wife 

chief-workman Neferhotep + his wife 

It is evident that the son here succeeded the father in the office of chief-workman. Neferhotep the elder interests us no further; we may merely note that he lived under Haremḥab, as is shown by the inscription of an offering-table, where he is called .....². As to Nebnūfer, he must have flourished during the long reign of

¹ I quote from my own copies. For the complete bibliography of these tombs cf. Porter-Moss, *Topographical Bibliography*, 53 and 153.

² Found and published by Bruyère in his *Rapport sur les fouilles de Deir el-Médineh* (1923-1924), 45 and Pl. 12.

Ramesses II, or at least a great part of it. When Neferhotep the younger became chief-workman we cannot say, but in any case it was before the end of the reign of Ramesses II, for we meet him in this office on an ostrakon from year 66 of a king¹ who, owing to the high regnal year, can be no other than Ramesses II. He occurs next many times in the log-book of the Theban Royal Necropolis recorded on the unpublished Ostraca Carnarvon, Nos. 402, 401, 403². They cover consecutive dates from Year 3, fourth month of the winter season, day 27, to Year 4, third month of the summer season, day 29, the change of the regnal year being on the day 18, third month of the summer season. In addition to this we find the chief-workman Neferhotep on two other ostraca of the same group, Nos. 404 and 400, with dates from the first month of the inundation season, day 18, to the third month of the same season, day 23, and from the third month of the winter season, day 2, to the fourth month of the winter season, day 2, respectively; the regnal year is not given on these two pieces, but from the fact that they were found along with the three mentioned previously we may safely assume that they referred to the year 3 or 4. The king to whom these dates refer is nowhere named, but we have strong reasons for thinking that it was Siptah, the second successor of Merenptah. At the beginning of the reign of Sethos II Neferhotep still holds the office of the chief-workman³, but he must have been already dead in the last year of his reign. Of this we have indirect but unmistakable proof in the Cairo Ostrakon 25515⁴. Here a marginal note written on the verso is dated in the fourth month of the winter season, day 16, of the year 6, which according to the whole text of the ostrakon can only be that of Sethos II. And this note mentions the chief-workman Penēb. Now the existence of Penēb as chief-workman implies that Neferhotep was no longer living, as the following consideration will show. It is well known that the workmen busy in the royal tombs were divided into two parts or "sides," "right" and "left" respectively. Each side was under a chief-workman, and consequently there were two of these in all. In the Carnarvon ostraca the two chief-workmen are Neferhotep and Hay, and it is clear from them that Neferhotep was at the head of the "right side," while his colleague Hay commanded the "left side." As Hay subsequently appears as chief-workman together with Penēb⁵, and is always at the head of the left side, we must assume that the change has taken place on the right side, in other words, that Neferhotep was succeeded by Penēb, while Hay remained in his office, being thus subsequently colleague of both Neferhotep and Penēb⁶. But we can advance this change by at least one year, *i.e.*, to year 5 of Sethos II. The Ostrakon Cairo J. 49887⁷, dated in the year 5 of an unnamed king, deals with some supposed insults committed against Sethos II. and it seems certain from the contents that this Pharaoh was still living, *i.e.*, that the year 5 is to be assigned to his reign. Since both Penēb and Hay occur in this document, it is evident that Penēb became chief-workman at least as early as the fifth year of Sethos II.

So far as Amennakht, the author of our text, is concerned, our other evidence

¹ Ostr. Cairo 25237.

² I am deeply indebted to Mr. Gunn for the copies of these ostraca and to Mr. Carter for the permission to quote from them.

³ Ostr. Metropolitan Museum, quoted by Gardiner, *Journal*, v, 191. For the next *cf.* my remarks in *Ann. Serv.*, xxvii, 199-200.

⁴ Of the *Catalogue* to be published. The ostrakon has been published previously by Daressy, *Rec. trav.*, xxxiv, 39 ff., but the marginal note in question has been omitted by him.

⁵ Cf. e.g. *Ann. Serv.*, xxvii, 196.

⁶ In Pap. Salt 124 Hay occurs, recto 2. 21.

⁷ Publ. *Ann. Serv.*, xxvii, 200-201.

bearing on his person must be regarded as somewhat doubtful. In Tomb No. 216 at Dêr el-Medinah, the very tomb which has helped us to establish the genealogy of the chief-workmen of the family of Neferhotep, there is on a wall a representation depicting, so far as preserved, five men adoring Osiris and Anubis¹. Of these five the first is Neferhotep the younger; then follows his father Nebnûfer, and the third is his grandfather Neferhotep the elder. Behind Neferhotep the elder we see the "royal scribe in the Place of Truth K̄enherkhepeshef," who is doubtless identical with the scribe of the same name occurring twice in our papyrus (1. 14. 18). The inscription accompanying the last person is unfortunately destroyed in part, and all that is still visible is "his beloved brother, the servant in the Place of Truth, Amen....". I have shown elsewhere that persons qualified as "servants in the Place of Truth" are in reality the workers of the Theban Royal Necropolis², and further it seems legitimate to refer the suffix *f* in "his beloved brother" not to the scribe K̄enherkhepeshef who immediately precedes, but to the first person depicted, *i.e.*, Neferhotep the younger, the owner of the tomb; at least the suffix *f* in "his father" and "father of his father" on the second and third men surely do refer to him. If we are right in considering the last man as brother of Neferhotep the younger, we are very probably justified in restoring his name as Amen[nakht] and identifying him with our Amennakht.

I can discover no other traces of our Amennakht, though a workman of this name often occurs in the ostraca of that period. But the name is so common that having no precise proof of filiation we remain in doubt as to his identity with our plaintiff.

We can now proceed to deal with the chief-workman Penēb, about whom we have already ascertained that he became chief-workman in the fifth year of Sethos II at the latest. Let us observe first that he is never given the title "chief-workman" in our papyrus. But from the manner in which he could dispose of the workmen we must suppose that he really was a chief-workman and consequently with a high degree of probability identical with the man bearing his name and title and occurring in our other evidence. Moreover, from recto 1. 3-4 it seems to follow, if my conception of this passage is right, that he gave a bribe to the Vizier, who then appointed him chief-workman, wrongly of course, since Amennakht had claims to this office, being himself a member of the family of chief-workmen. It is even possible that Amennakht addressed his plaint to the Vizier in order to cause him to remove Penēb from his position and to give it to the rightful claimant.

Penēb began his career evidently by becoming a *rmt-ist*, "man of the crew," *i.e.*, a simple workman. In this function he occurs as early as Year 66 of Ramesses II, on the Cairo Ostrakon 25237, verso, together with his wife Warbet. This document is partly illegible³, so that we cannot see exactly what was the point at issue. We can only say with certainty that Penēb and Warbet receive a *shn* "command" and then take an oath. But the occurrence of Warbet is important, since it helps us to identify this "workman" Penēb with the chief-workman of the same name. This latter is found as the "chief of the crew of Pharaoh in the Place of Truth Penēb" together with his wife Warbet and his son Ḳapahte on a fragment of hieroglyphic inscription discovered by M. Bruyère at Dêr el-Medinah⁴. That Penēb of our papyrus had a son Ḳapahte is stated recto 2. 4.

¹ Bruyère, *Rapport sur les fouilles de Dêr el-Médineh* (1923-1924), 52, note (collated).

² *Revue de l'Égypte ancienne*, 11, 200-209.

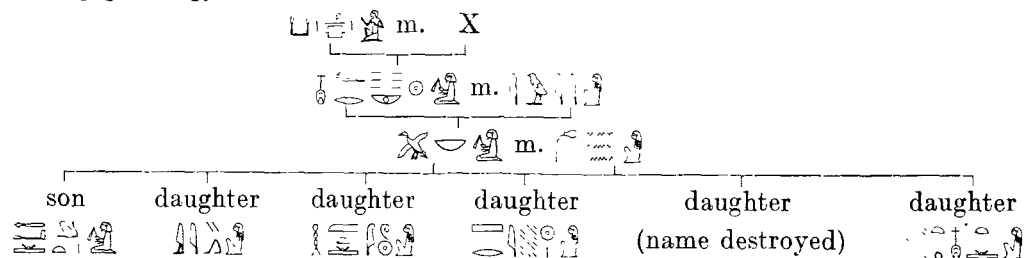
³ I have made a careful copy of this document.

⁴ Published by Bruyère, *op. cit.*, 52.

The genealogy thus established

Penēb m. Warbet
 └─┬─┘
 ʿApahte

enables us to find the tomb belonging to the family. It is the tomb No. 211 at Dêr el-Medînah¹, the inscriptions of which confirm the existence of his wife and his son named above, and beside this add further members of the family, resulting thus in the following genealogy:



Of the daughters only one. , bears the title *nb-t pr* "lady of the house," being thus qualified as a married woman. She is undoubtedly identical with the lady of the same name occurring in a picture of Tomb No. 211 as the wife of a Kasa, who consequently must be the son-in-law of Penēb, and not his grandfather of the same name.

As to the father of Penēb, Nefersenet, the name seems to be so rare among the workmen of the Royal Necropolis that we are perhaps entitled to consider all the persons bearing this name and occurring in the tombs of Dêr el-Medînah, in the graffiti on the Theban rocks and on the ostraca, as identical. Thus we find Nefersenet in Tombs No. 219 and No. 10, the latter dating from the reign of Ramesses II. In the first he bears the title "servant in the Place of Truth," while in the second he is depicted still as a little boy weeping over the mummy of his father. This father is evidently Kasa, joint owner with Penbuy of Tomb No. 10. Nefersenet occurs also in the hieratic graffito No. 1232, copied by the present writer and still unpublished, as father of Penēb. There is evidence for assigning him to the epoch of Ramesses II in Ostrakon Brit. Mus. 5634². This is dated in the year 40 (or more) of an unnamed king and contains a list of workmen, among whom ro. l. 8 names our Nefersenet. The date, year 40, can refer only to Ramesses II.

Of Penēb the British Museum has two stelae offered to Mersegert, Nos. 272 and 273³. The publication has misread the name of the donor as *hri is-t m S-t M:ct* but it is certain that is to be read. The two stelae name his son "servant in the Place of Truth ʿApahte," while over the names of the other sons they are seemingly in complete disagreement, the first giving Penēb and Nebmehit, the second Hednakht. There is however no reason why we should not consider all of them as further sons of the same person, since we observe that the families of the Necropolis workmen were very numerous.

Being now fully acquainted with the members of the family of Penēb, we may return to the person of Penēb himself. We find him either alone or with his colleague, the chief-workman Hay, on the Ostraca in Cairo, of which J. 49887 of the year 5, very probably of Sethos II, has been already quoted above in connexion with Neferhotep.



¹ Unpublished, but a mention by Wiedemann, *Proc. Soc. Bibl. Arch.*, viii, 226b.


² *Inscriptions in the Hieratic and Demotic Character*, Pls. 20 and 21.

³ *Hieroglyphic Texts from Egyptian Stelae, etc., in the British Museum*, v, Pl. 42, and vii, Pl. 28.

Others are 25515, which attests Penēb for the last year of Sethos II (*cf.* above), 25516 (year 6 and year 1, apparently Sethos II and Siptah Sekhaenrē-setepenrē), 25517 (year 1), 25518, 25519, 25520 (year not preserved), 25521 (year 1 and 2), 25514 (year not given).

Nothing is known about the end of Penēb. Our document shows that the charges which the people of the Royal Necropolis made against him were very grave, and if the Vizier gave credence to them, the punishment inflicted upon Penēb must have been heavy. We have no means of finding out when this happened. Probably it was in the reign of Siptah Sekhaenrē-setepenrē, in whose second year we meet Penēb for the last time on the ostraca. It is unfortunate that we have no documents dating from the last years of the Nineteenth Dynasty and the first years of Ramesses III, the nearest being an unpublished Cairo Ostrakon and Florence Ostrakon 2619. They are from years 12 and 15 respectively: the king is not named, but must be Ramesses III. In both the chief-workmen in office are Hay and Nekhemmut: Nekhemmut was therefore very probably the successor of Penēb in the office of chief-workman.

The evidence connected with the viziers in our papyrus points in the same vague way to the reign of Siptah II or later for the end of Penēb. In Pap. Salt 124 two viziers are mentioned, neither of which can well be identical with the vizier to whom Amennakht addressed his plaint. They are Amenmose (recto 2. 17) and Prēmhab (recto 1. 3). Amenmose held this office between Year 8 of Merenptah or later (in this year the Vizier Pinehas is attested by the Cairo Ostr. 25504) and the death of the chief-workman Neferhotep (year 5 of Sethos II at the latest), for Prēmhab is already named in our papyrus in connexion with his death. Of considerable interest is the passage recto 2. 18, where we are told that Penēb made a plaint against the Vizier Amenmose to a person called  *Msi*, who in consequence removed Amenmose from his office. As the Vizier was the first person after the king, it is almost certain that *Msi* who disposed of Amenmose was one of the last kings of the Nineteenth Dynasty. It has been suggested by Gardiner (*Mes*, 14, and *apud* Ranke, *Zeitschr. f. äg. Sprache*, LVIII, 135) that *Msi* was a nickname for Ramesses, more precisely Ramesses II. This supposition is, in view of what we have found about the chronology of the acting persons of our papyrus, hardly likely. As it is expressly stated that it was the chief-workman Neferhotep who made a plaint to the Vizier Amenmose, we may safely assume that these things happened before Sety II—for, as we saw, Neferhotep must have died during his reign—but after Merenptah, since there is no evidence that Amenmose was Vizier earlier than the last years of Merenptah's reign. Now we know only two kings between Merenptah and Sety II, namely Amenmose and Siptah I. Of these Siptah I bore no name of which *Msi* could reasonably be a contraction or nickname, and so for me there is only one possibility, namely that *Msi* is a nickname of the king Amenmose. In any case Ramesses II is too remote for the events recorded in our papyrus; moreover his nickname was *Ssi*. To the king Amenmose points perhaps also the scornful manner in which the name *Msi* is written, without cartouche and any title or determinative . We know that Amenmose was an usurper (*cf.* E. Meyer, *Gesch. des Altertums*, II, 1, 2nd ed., 580), and that his memory was by no means respected by posterity¹. About Prēmhab we

¹ Of course these conclusions would hardly be right, should our *Msi* be identical with  in Anast. I, 18, 2, in which case *Msi* would rather be a general appellation for Pharaoh, as Gardiner (*Hierat. Texts*, 20*, n. 3) thinks. But it is interesting that in both passages *Msi* is somebody who is apparently unfavourably disposed towards the minister of justice.

only know that he was still in office in the first years of Siptah II (Cairo Ostr. 25515). Looking for the vizier who succeeded Prēmḥab and who very probably removed Penēb from the Necropolis, we find that the only vizier attested for the end of the Nineteenth Dynasty is Ḥori. Weil¹ notes several viziers of that name, admitting that they are possibly identical, but only in the case of one is he able to fix the epoch in which he lived, namely the reign of Ramesses III. We may add the reign of Setnakht on the strength of L., D., Texte III, 224. This points for our Ḥori to the very beginning of the Twentieth Dynasty. The other evidence adduced by Weil, namely Pap. Turin, P.R., XLVII, 10, does not contradict this dating, and is very interesting, since it contains a mention of the chief-workman Penēb. The above quoted passage of the Turin papyrus is a plaint which the workman Penḥanūket laid in Year 29 of Ramesses III before the authorities of the Theban Royal Necropolis, and which concerns among other things thefts of stones committed somewhere in the neighbourhood of the tomb of Ramesses II. In XLVII, 10 ff. we read: *Ḥr pṯr-tn t3 s-t ḥt n t3tṯ Ḥrī ḥr t3 s-t in inr, dd n-f: Dlw ʿ3-n-is-t P3nb p3l-i itf rmt r in inr im-s*, which I may tentatively translate as follows: "But you saw the standpoint of the Vizier Ḥori concerning the place, where stones were taken off, when it was said to him: 'The chief-workman Penēb, my father, caused men to take off stones therefrom.'" The passage is not clear, but it seems to me that the plaintiff alludes here to a judicial case of the epoch of the Vizier Ḥori and the chief-workman Penēb, who are thus associated and consequently contemporary. This quotation would hardly be conceivable, if the Vizier had not decided that this removal of stones from a royal tomb was inadmissible. Probably the incident here referred to took place during the final trial of Penēb, and in this case Ḥori would be the vizier to whom the plaint of Amennakht was or was to be addressed. In any case the Turin passage does not prove that Ḥori lived until Year 29 of Ramesses III. Moreover the Vizier Ḥori occurs on some unpublished Cairo ostraca dated in the first year of an unnamed king. For palaeographical and other reasons this cannot be Ramesses IV, to whom one would be inclined if the Vizier Ḥori had lived at the end of the reign of Ramesses III, but is either Ramesses III himself or one of his immediate predecessors.

The subordinates of Penēb were *rmt-is-t*, "men of the crew." This is clear not only from numerous documents which have come down to us from the Theban Necropolis and are now dispersed in various museums and collections, but also from those passages of our papyrus where Penēb is said to have disposed of the "men of the crew," namely 2. 5, 2. 19 and vs. 1. 14. These "men of the crew" were the workers engaged in work in the rock-tombs of Bibân el-Molûk and Bibân el-Ḥarîm, i.e., in the Royal Necropolis at Thebes; and in Pap. Salt *ḥrti* "stone-cutter" is directly a synonym for *rmt-is-t*. So the list of "stone-cutters" in 2. 10 contains the names of men, who in other documents are called "men of the crew." According to verso 1. 7 Penēb when punished by the Vizier, evidently Amenmose, on account of the charge of Neferhotep, as is clear from 2. 17 and foll., threatened to obtain his own re-appointment as "stone-cutter," while the Vizier would be removed from his office.

The workmen mentioned in our papyrus are: ʿApaḥte (2. 10, probably identical with Penēb's son ʿApaḥte 2. 4), ʿAnakht (2. 12), Wennūfer (2. 12), Piôm (2. 12), Pashed, son of Ḥaḥ (2. 11), Pendua (2. 2), Nebnūfer, son of Wazmose (2. 20), Nebnūfer, son of Pennub (1. 20), Nakhtmin (twice named 2. 11 and 12), Nebnakht (2. 11), Nebsmen (2. 11), Rome (2. 11), Ḥaremuia (2. 10, identical with the next?), Ḥaremuia, son of Beky (2. 11),

¹ *Die Veziere des Pharaonenreiches*, 109–111, 113.

Ḥesysenēbef (2. 3), Khons (2. 12), Ḳenna (1. 17 and 2. 2), Ḳenḥerkhepeshef (2. 10), Kasa (2. 10), and Kasa, son of Ramose (2. 10). As has been said, most of them occur in other documents, mainly ostraca from Bibân el-Molûk (Ostraca Carnarvon and Ostraca Cairo). It would be impossible and useless to enumerate all of them, as they are mostly unpublished at present¹. Nevertheless reference must be made to the list of workmen compiled with the help of the Cairo Ostrakon 25521². Here we find our Ḳapaḥte, Ḳanakht, one Pashed, Nebnūfer son of Wazmose, Ḥaremuia, Khons, Kasa son of Ḳapaḥte (evidently identical with the first man of this name in the above list), Nebnūfer, son of Pennub, Ḥesysenēbef and Ḳenḥerkhepeshef. The Ostraca Cairo 25514 and 25517 add Kasa son of Ramose, and Rome, J. 49887 adds Wennūfer and Nebsmen. Piōm occurs on 25510, Pendua, Nebnakht and Ḳenna on the unpublished Carnarvon Ostraca. All these ostraca clearly date from the last ephemeral kings of the Nineteenth Dynasty. And not only for the names of workmen are they of interest; they also confirm some of the charges against Penēb recorded in the papyrus Salt. So for instance the Ostraca Cairo 25519 and 25521 tell us that Nebnūfer, son of Wazmose, did not work because he was feeding the ox of Penēb, supporting thus the charge of our papyrus 2. 20, and both 25517 and 25521 record several workmen who, working for Penēb, neglected their proper work in the royal tomb. That Penēb employed his subordinates for work of his own was surely not a heavy crime, and his colleague Ḥay also did it occasionally. It is interesting to note that Penēb used not only the workmen of the "right side" of which he was chief-workman, but also Nebnūfer, son of Pennub, Ḥesysenēbef and Ḳenḥerkhepeshef, who, belonging to the "left side"³, were properly under orders of the chief-workman Ḥay.

Being thus able to prove the correctness of some of the charges made by Amennakht, we must assume that the others, or at least a great part of them, were justified too. It is unfortunate that we do not know the fate of Penēb and his family. Nor are we sure that he was actually buried in Tomb No. 211 at Dêr el-Medīnah or that this tomb is identical with that which he carefully prepared for himself (Pap. Salt recto 2. 6). For all that remains of Tomb No. 211 is an empty subterranean chamber with roughly painted inscriptions and representations badly damaged by the water which has penetrated into the tomb. To judge from the titles which Penēb bears in these inscriptions, the tomb, or at least this part of it, was constructed when Penēb was still a mere workman. When we read in our papyrus that Penēb erected four stone columns in his tomb, we must suppose that these columns were in the chapel, which was always constructed over the tomb, and which in the case of Tomb No. 211 has completely disappeared, or that Penēb, after he had become chief-workman, left his old tomb, and began to construct another, more luxurious, in another part of the Necropolis of Dêr el-Medīnah. If this second tomb really existed it has not been discovered, or else it has been so destroyed as to be now unrecognizable.

Allusion has been made above to the strange discrepancy between the primitive style of the papyrus and its perfect writing and orthography. The plaintiff, who was a mere workman, can hardly have been able to write, and so probably had recourse to a professional writer, of whom several seem to have been attached to the workmen's

¹ The Cairo Ostraca are to be published before long in the *Catalogue générale*. To this refer the numbers assigned to them throughout this article; only the numbers prefixed by J. are the old numbers of the *Journal d'entrée* of the Cairo Museum.

² Old number J. 49866, *Ann. Serv.*, XXVII, 196-7.

³ Cf. the list given in *Ann. Serv.*, XXVII, 196-7.

village of the Royal Necropolis for writing log-books of the work, legal documents, accounts, etc. It was probably the plaintiff who dictated his charges to the scribe and was responsible for the clumsy style with its abuse of conjunctives and chronological disorder. The scribe will have followed his dictation slavishly. This assumption is supported by a study of the graffiti of the Theban Necropolis, which suggest that the workmen, or at least most of them, were hardly able to do more than reproduce in hieroglyphs their names accompanied by the title "servant in the Place of Truth," with which they were probably acquainted from the stelae and other funeral monuments made in the sculptor's workshop. They were unable to write in hieratic.

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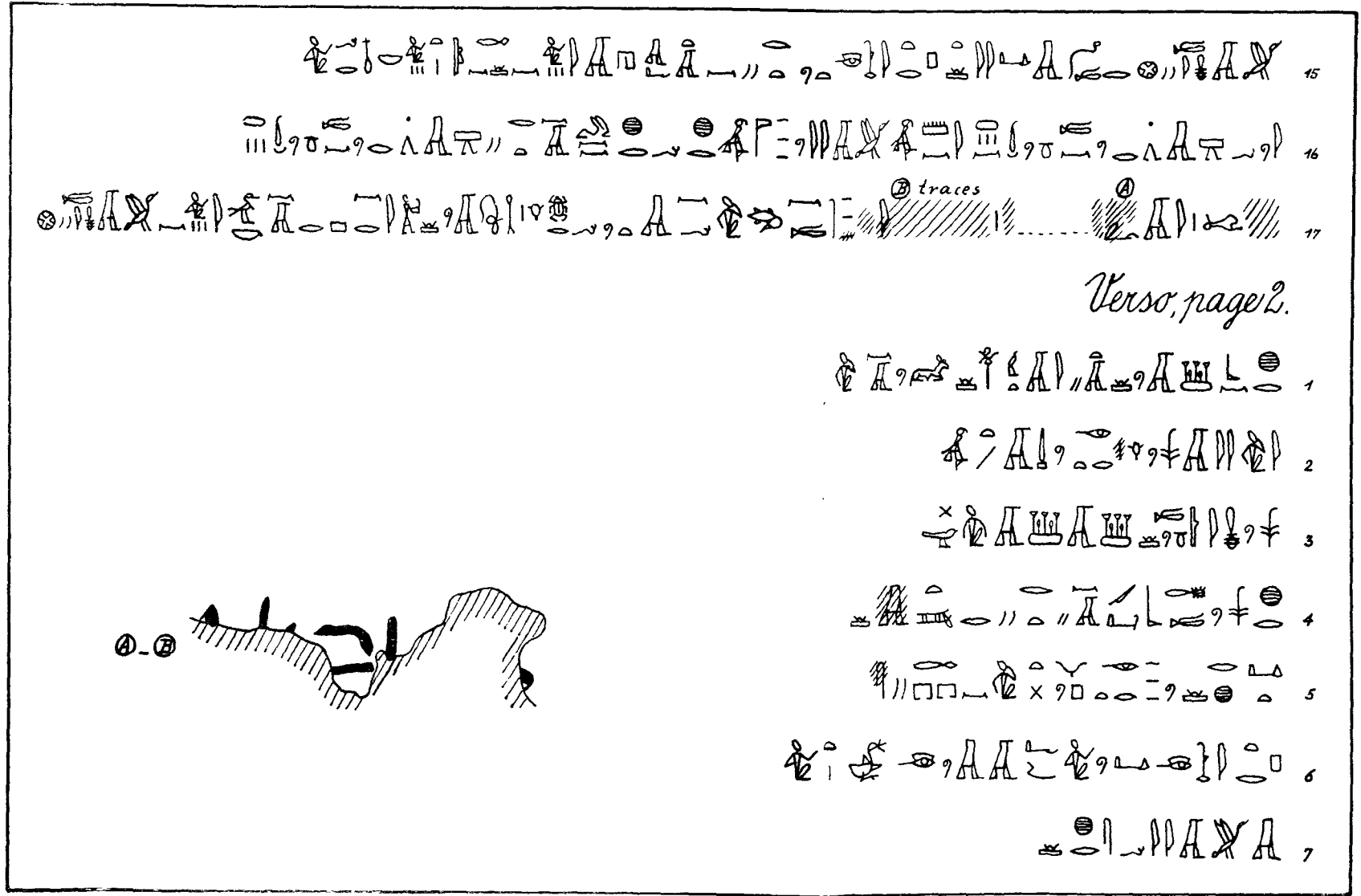
Recto, page 2.

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① Hardly \approx . - ② Tail of \rightarrow visible here. - ③ When $\overline{\text{F}}$, then abnormal form; cf. the normal form of this group in 2, 12. -
④ ρ certain (9). - ⑤ Dr. Lange's reading. - ⑥ Or $\overline{\text{E}}$ with $\overline{\text{U}}$ without dot. - ⑦ Without dot. - ⑧ Or $\overline{\text{E}}$ with $\overline{\text{U}}$ without dot.

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Ⓐ π less probable. - Ⓑ \mathbb{Z} ; \mathbb{Z} does double duty for \mathbb{A} and \mathbb{E} . - Ⓒ \mathbb{Z} . - Ⓓ \mathbb{C} & \mathbb{D} , with \mathbb{E} without dot.



Pap. Salt 124 (Brit. Mus. 10055), verso 1, 15-2, 7.

BIBLIOGRAPHY: GREEK INSCRIPTIONS (1927-1928)

BY MARCUS N. TOD

In the following Bibliography, which forms a continuation of that published in this *Journal*, XIII, 247 ff., and follows the same plan, I attempt to give a brief survey of books and articles published in 1927 and 1928.

The useful, not to say indispensable, *Sammelbuch*, inaugurated by F. PREISIGKE, has made substantial progress: the most recent instalment, edited by F. BILABEL, completes the third volume and contains 445 documents, together with indexes, addenda and corrigenda to the whole volume (*Sammelbuch griechischer Urkunden aus Ägypten*, III, 2, Berlin, 1927; cf. the review by M. HOMBERT, *Rev. Belge Phil. Hist.*, VII, 1515 f.). The new half-volume of E. MAYSER'S *Grammatik der griechischen Papyri aus der Ptolemäerzeit*, referred to in my last Bibliography, has been reviewed by G. GHEDINI (*Aegyptus*, VIII, 361 ff.) and by H. MELTZER (*Indogerm. Forschungen*, XLVI, 290 ff.). E. BICKERMANN has used the evidence of inscriptions and papyri to determine the meaning of the title *ἀσπός* in Graeco-Roman Egypt and the position of those who bore it: he concludes that the *ἀσπός* are Alexandrians, who, belonging to the demes, enjoyed the fullest political and civil rights (*Rev. Philol.*, I, 362 ff.). Among the documents appended to F. F. ABBOTT and A. C. JOHNSON'S *Municipal Administration in the Roman Empire* (Princeton, 1926) are forty-five from Egypt: three of these are inscriptions, viz. the edicts of Vergilius Capito, A.D. 49 (No. 163 = DITTENBERGER, *O.G.I.S.*, 665), of L. Lusius Geta, A.D. 54 (No. 164 = DITTENBERGER, *O.G.I.S.*, 664), and of Tiberius Julius Alexander, A.D. 68 (No. 165 = DITTENBERGER, *O.G.I.S.*, 669). F. HEICHELHEIM has added to the value of his prosopography of the foreign population in the Ptolemaic empire by the publication of a considerable list of additions and corrections (*Arch. Pap.*, IX, 47 ff.).

J. ZINGERLE and A. WILHELM have examined a fragmentary epitaph from Alexandria (*Sammelbuch*, 5042): the former, adducing numerous examples of the metathesis of letters or syllables in Greek inscriptions, seeks to show that the concluding letters *ονεθλασας* are written in error for *ονελαθήςσας* = *ὄνηλαθήσας* (*Glotta*, XIII, 162 ff.), while the latter offers a much more straightforward explanation of the puzzle, writing (with K. WESSELY, *Deutsche Literaturztg.*, 1913, 78) *ὄν ἐθίλασας*, "whom thou didst suckle," and regarding the memorial as erected to a nurse by her children and a foster-son (*Glotta*, XVI, 274 ff.). In a metrical inscription on an Alexandrian cenotaph (*Sammelbuch*, 4313) of the first or second century of our era, ZINGERLE regards *φασέως* as a mistaken writing for *σαφέως* (*Glotta*, XIII, 162).

I need not here linger over C. LAGIER'S work on the Rosetta Stone (*Autour de la pierre de Rosette*, Brussels, 1927), for, valuable as it is, it approaches the monument from the standpoint of its contribution to the decipherment of the Egyptian hieroglyphic script and does not deal directly with the Greek text.

Among recent accessions to the Cairo Museum, published by G. LEFÈVRE (*Ann. Serv.* XXVIII, 36 f.), is the limestone base of an alabaster statuette of the Ptolemaic age, found at Kom Sanhour and bearing an inscription recording its subject and dedicator. J. ZINGERLE has dealt very fully with the difficulties involved in the restoration and interpretation of an imperfectly preserved metrical epitaph (*Sammelbuch*, 5829) from Terenuthis in the Delta (*Jahreshefte*, XXIII, Beiblatt, 394 ff.).

C. C. EDGAR has published, and illustrated by an admirable photograph, another metrical epitaph of the Roman period found at Saqqārah: it consists of eight elegiac couplets and takes the form of a dialogue between the stone lion, which once surmounted the grave-stele, and the passer-by, in which are several echoes of epigrams of Antipater Sidonius (*Ann. Serv.*, XXVII, 31 f.).

The trilingual stele discovered in 1923 at Tell el-Maskhūṭah, near Abu Suwēr, and now preserved in the Cairo Museum (cf. *Journal*, XI, 328; XIII, 248), continues to attract attention. H. SORTAS, in a series of "Notes complémentaires sur le décret en l'honneur de Ptolémée IV," admits the value of the contribution made by W. SPIEGELBERG to the interpretation of the inscription, but discusses in detail some points of partial or entire disagreement: in an appendix he adds a French translation of the document (*Rev. Ég. Anc.*, I, 230 ff.). W. OTTO has discussed further the historical value of the decree in an excursus

to his "Beiträge zur Seleukidengeschichte des 3. Jahrh. v. Chr." (*Abhandlungen d. Bayer. Akad. d. Wissenschaften*, Philos.-philol. u. hist. Klasse, xxxiv, 1, 80 ff.), and E. CAVAIGNAC has dealt with the Eleazar named in it (*Rev. Ég. Anc.*, II, 55).

J. ZINGERLE has discussed a votive epigram (*Sammelbuch*, 4279 = *I. G. Rom.*, I, 1152) from the quarries of Gebel Tukh, near Ptolemais, and proposes to see in the word ΑΤΡΗCΙΟΙ (l. 3), variously, yet always unsatisfactorily, emended, a corruption of *κασπῆσιοι*: the viceroy, he thinks, granted the services of some of the garrison troops for quarrying, and so lightened the burden resting on the citizens (*Archiv f. Papyrusforschung*, IX, 5 ff.). N. AIMÉ-GIRON has independently made (*Ann. Serv.*, xxvii, 48) the same correction in his interpretation of a trilingual inscription of Denderah which I suggested in my last Bibliography (*Journal*, XIII, 249, note 1). B. A. VAN GRONINGEN has given a restored text of a dedication from Coptos (*Sammelbuch*, 5074), erected in A.D. 223/4 by one who had served as *ὑπογυμνασίαρχος* and as *Ἑλληνοδίκης* of the seventh "Olympian games," celebrated at Alexandria in A.D. 200 (*Mnemosyne*, LV, 263 ff.; cf. *Rev. Archéol.*, xxviii, 383).

J. BAILLET's monumental collection of graffiti from the tombs of the kings at Thebes (cf. *Journal*, XIII, 249) continues to evoke interest and to stimulate study. G. SEURE devotes a valuable review to the work (*Journal des Savants*, 1927, 168 ff., 262 ff., 307 ff.) and elsewhere combines a general survey of its contents with a detailed examination of the nineteen Greek metrical impromptus which it contains, interpreting their meaning and in some cases emending their texts (*Rev. Ét. Anc.*, xxix, 341 ff.). BAILLET himself has dealt, in an interesting lecture, with the twenty-five or more visitors to the tombs who describe themselves as *ἱατροί*, suggesting possible connexions or identifications with doctors known to us from literary sources, notably the works of Galen and Aëtius (*Mémoires de la Société d'Agriculture, Sciences, Belles-Lettres et Arts d'Orléans*, xx, 39 ff.). P. GRAINDOR discusses the two graffiti (BAILLET, *Inscr.*, 1263, 1889 = DITTENBERGER, *O.G.I.S.*, 720, 721; cf. *Journal*, IX, 237 f.) recording the presence, in A.D. 326, of the Athenian Nicagoras, son of Minucianus, *ὁ δαδοῦχος τῶν Ἑλευσινίων*, in one of which he expresses gratitude to the Emperor Constantine, to whom he owed the opportunity of visiting the Syringes: GRAINDOR argues that it was not as the occupant of an important priesthood but as a talented orator, a distinguished philosopher and an Athenian that Nicagoras received from the Emperor a subsidy or other facilities enabling him to travel in Egypt (*Byzantion*, III, 209 ff.).

Among the monuments recently added to the Cairo Museum and described by G. LEFÈVRE are a stele found in the Oasis of Dakhleh, twenty kilometres S.W. of El-Ḳasr, adorned with reliefs, hieroglyphic texts and a Greek inscription dated 27th December, A.D. 78, and a Byzantine text, probably of the sixth century, from a mound close to the temple of Aṣwān, commemorating the construction of part of the fortifications of Syene (*Ann. Serv.*, xxviii, 29 ff.).

In the course of the excavations carried on in 1926 at Medamūd under the auspices of the French Institute of Oriental Archaeology, eight Greek inscriptions on stone were discovered, as well as a number of inscribed lamps. These have been published by E. DRIOTON and include (a) a stele dated 30th March, 105 B.C., recording the prayer *Ἡρακλῆς ὁλ[βι]όβιος δοίη ζῆν τῶις ἐκ Τουπήων ἱερεῦσι*, followed by the names and patronymics of the twelve dedicators; (b) an inscription erected in honour of a *στρατηγὸς καὶ πάτρων τοῦ νομοῦ* by one who held several financial posts; (c) a dedication *Λητοῖ θεᾷ μεγάλη*, and (d) a votive text set up on 17th October, A.D. 291, *θεῶ μεγίστῳ* by one who was *εἰρηνάρχης τοῦ νομοῦ* (*Fouilles de l'Inst. Fr. d'Arch. Or.* (1926): *Rapports Préliminaires*, IV, 2, 72 ff., Nos. 412-419; cf. F. BISSEON DE LA ROQUE, *op. cit.*, IV, 1, 76 ff.). A further fragmentary Greek inscription was brought to light in the excavations of 1927 (F. BISSEON DE LA ROQUE and J. J. CLÈRE, *op. cit.*, v, 149, No. 480).

A popular account of the trilingual stele of C. Cornelius Gallus found at Philae, published by A. DUPOUY in the Paris *Figaro* of 25th February, 1928, has been reprinted in the *Chronique d'Égypte*, III, 194 ff. J. ZINGERLE has examined a votive epigram from Philae (*I. G. Rom.*, I, 1299), dating probably from A.D. 144, and has interpreted the enigmatic *πόρπων* as equivalent to *purpuram* (*Archiv f. Papyrusforschung*, IX, 10 ff.), while U. WILCKEN has dealt in an appended note (*ibid.*, 13 f.) with the question of the date and with the person of the military tribune Sabinus, with special reference to two inscriptions of Talmis (*Sammelbuch*, 4603, 4616).

In the little church of 'Abd el-Gâdir, near the Second Cataract, described by F. LL. GRIFFITH, are a number of Greek legends, painted in red and black and relating to painted figures, as well as twelve ancient graffiti partly in bad Greek and partly in a mixture of Greek and Nubian (*Liverpool Annals*, xv, 63 ff., Pls. xxix-xxxi, xlv). J. W. CROWFOOT has published five epitaphs from Nubia, of which four were found in Dongola province and one on an island a little upstream of Wādī Ḥalfa (*Journal*, XIII, 226 ff.):

one bears the date A.D. 858, and the latest, badly written and full of mistakes, must be assigned to about A.D. 1080.

A well known inscription of Adulis (DITTENBERGER, *O.G.I.S.*, 54) has been re-examined by W. OTTO in connexion with his researches into the history of the Seleucids in the third century B.C. (*Abhandlungen d. Bayer. Akad. d. Wissenschaften*, Philos.-philol. u. hist. Klasse, xxxiv, 1, 51, 63 ff.).

T. KOZMINE-BOROZDINE has published a photograph of a Christian grave-stele from Egypt, now in the Museum of Fine Arts at Moscow, bearing a relief and a brief epitaph (*Zhizn' Muzei*, II, 13), and A. VOGLIANO has proposed alternative emendations in the reading of a funerary epigram now in the collection at Braunsberg (*Athenaeum*, I, 262 f.; cf. S. DE RICCI, *Rev. Épigr.*, I, 145, A. VOGLIANO, *Rendic. dell' Ist. Lombardo*, XLVIII, 689 f.).

It will not, I hope, be deemed irrelevant if I close this Bibliography with a brief account of several inscriptions found beyond the confines of Egypt and Nubia but relating to the cult of the Egyptian deities.

Among the inscriptions from Thespieae and the Vale of the Muses published by A. PLASSART is a dedication to Serapis, Isis and Anubis (*B.C.H.*, I, 425 f., No. 48). The fruitful excavations recently carried on in Thasos by the French School at Athens led to the discovery, in June, 1924, of an interesting second-century resolution of a guild of *Σαραπισταί*, which has been edited by H. SEYRIG; it directs that the title of *ἐπώνυμος* be put up to auction, and determines the privileges and the duties which its tenure should involve. The document closes with the name of the purchaser, the price paid (ninety-six drachmas) and a list of the members (*B.C.H.*, LI, 219 ff., 373). At Cyme, on the Aeolic coast of Asia Minor, several texts were unearthed in 1925 among the ruins of the temple of Isis. These have been published by A. SALAČ (*B.C.H.*, LI, 378 ff., Nos. 3-6), and comprise (a) a dedication to Isis, dating from the second century of our era; (b) a fragment of a votive inscription addressed, perhaps, to Isis and Osiris; (c) an inscribed ushabti dating from the early sixth century B.C., and (d) a perfectly preserved copy of the prose hymn to Isis, of which a portion was already known from Ios (*I.G.*, XII, 5, 14 and p. 217) and a metrical paraphrase from Paros (*I.G.*, XII, 5, 739). Among the series of remarkable inscriptions which have rewarded the Italian excavators of Cyrene is the opening part of an iambic version of the hymn to Isis, dedicated to Isis and Serapis in A.D. 103, and erected in the Iseum on the acropolis. It has been published by G. OLIVERIO (*Notiziario Archeologico*, IV, 207 ff.) together with a mutilated epigram in elegiac verse, the Isiac character of which is, however, doubtful (cf. F. HILLER VON GAERTRINGEN's restoration in *Riv. Filol.*, LVI, 415). J. KEIL's excavation at Ephesus in 1926 brought to light, *inter alia*, a dedication of a statue of Caracalla by one who erected it *τοῖς ἐπὶ θεοῦ μου Νείλου Σαράπιδι θύουσιν*, which aids in the identification of the site of the Ephesian sanctuary of the Egyptian gods (*Jahreshefte*, XXIII, Beiblatt, 268). Finally, L. ROBERT has suggested an improved restoration of a passage in the Prienian regulation (*Inscr. v. Priene*, 195) relative to the cult of those same deities (*Rev. Ét. Gr.*, XI, 220 ff.).

BIBLIOGRAPHY: CHRISTIAN EGYPT (1927-1929)

By DE LACY O'LEARY

I. BIBLICAL.

(a) *Old Testament.*

H. A. SANDERS and C. SCHMIDT, *Minor Prophets in the Freer Collection and the Berlin Fragment of Genesis*, N.Y. (1927), xiii+436, 7 plates, has been reviewed by A. CALDERINI in *Aegyptus*, ix (1928), 164-5, by F. G. KENYON in *Journal* (1928), 329-30, by H. ST. J. THACKERAY in *J.T.S.*, xxx (1929), 218-9, and by P. THOMSEN in *Phil. Woch.* (1928), 1185-7.

W. TILL, *Die achmimische Version der XII kleinen Propheten*, Copenhagen (1927), xxxii+151, has been reviewed by W. E. CRUM in *J.T.S.*, xxix (1928), 207-11, who points out that T. assumes a Sa'idic version between the Akhmimic and the Greek. It has been reviewed also by F. LL. GRIFFITH in *Journal* (1928), 332, by J. LEIPOLDT in *O.L.Z.* (1929), 346-7, more briefly by A. CALDERINI in *Aegyptus*, viii (1927), 382.

The projected work of BURMESTER-DÉVAUD (cf. *Journal*, 1927, 251) is considered by A. in *Rev. Bibl.* (1927), 308. Their edition of the Boh. Psalter (cf. *Journal*, 1927, 251) is reviewed by A. VITTI in *Biblica*, ix (1928), 243-4, and by H. JUNKER in *Wiener Z. f. d. Kunde des Morgenl.*, xxxiv (1927), 290.

G. P. G. SOBHY, *The Book of the Proverbs of Solomon in the Dialect of Upper Egypt*, Cairo, published by the Univ. of Egypt, printed el Shams Office (preface dated 1927), 359+4, is from a codex discovered in the hills of Old Cairo; the text of Proverbs occupies pages 164-359, the first chapter, which is very illegible, is completed from the text published by Ciasca. The editor suggests that it is of the 6th cent. It forms a useful and interesting addition to the Sa'idic texts of the O.T. Congratulations are due to Dr. Sobhy and to the Egyptian University for this further evidence of the efforts made to encourage the study of Coptic in its native land.

A. VITTI, *Le varianti del Salterio boairico del Cod. Vat. Copt. 5*, appears in *Biblica*, ix (1928), 341-9.

(b) *New Testament.*

M. J. LAGRANGE, *Un nouveau papyrus contenant un fragment des Actes*, appears in *Rev. Bibl.* (1927), 549-60.

A. C. CLARK, *The Michigan fragments of the Acts*, in *J.T.S.*, xxix (1927), 18-29: these deal with the papyrus bought by the Univ. of Michigan in 1924 (Michigan pap. 1571), Acts xviii. 27-xix. 16, and so H. A. SANDERS, *A papyrus fragment of Acts in the Michigan collection*, in *Harr. Th. R.*, xx (1927), 1-19. Very full examination and notes in Lagrange's article.

J. H. ROPES and W. H. P. HATCH, *The Vulgate, Peshitto, Sahidic, and Bohairic Versions of Acts and the Greek MSS.*, in *Harr. Th. R.*, xx (1928), 69-95, is an essay in the application of statistical methods to textual criticism. In dealing with the Sa'idic text the conclusion is reached that this text is nearer to the old uncials (B, **Σ**, A, C, 81) than the Vulgate, and closer to B than is the case with the Pesh. and Boh. There is in the Sa'idic the presence of "a considerable (though for the most part intrinsically uninteresting) 'Western' element, absent in the Bohairic" (p. 87). The Boh. is probably not earlier than the 7th cent., but is not affected by the Antiochian standardized text. Generally, the readings peculiar to **Σ** are unpopular in all versions.

The writers maintain that the Vulgate is independent of the Antiochian, in opposition to the theories of Wordsworth and White. A noteworthy comment occurs at the conclusion: "the study of these figures has impressed upon us anew the extreme difficulty of the use of statistics in textual criticism" (p. 95).

II. APOCRYPHAL, GNOSTIC, ETC.

(a) *Old Testament Apocrypha.*

A New Jeremiah Apocryphon appears in MINGANA and RENDEL HARRIS, *Woodbrooke Studies*, fasc. II, in *Bull. of Joh. Rylands Libr.*, xi (1927), 329-437. Pp. 329-52 give a general introduction to this document and to the *New Life of John Baptist* (cf. below). The work is in Syriac, but appears to be a translation from a Coptic text (cf. notes on *New Life of J.B.*). Preface by Dr. Mingana (352-3), transl. (353-95), and text (396-437).

G. H. BOX, *The Testament of Abraham*, Lond., 1927, 125. The appendix contains a translation of the Coptic version of the "Testament of Isaac and Jacob" by S. GASELEE. It has been reviewed by J. BEHM in *O.L.Z.* (1928), 848-9.

(b) *New Testament Apocrypha.*

MINGANA-RENDEL HARRIS, *Woodbrooke Studies*, fasc. II, in *Bull. Joh. Rylands Libr.*, XI (1927), 329-498, contains a *New Life of John Baptist*, general introduction (329-52) showing the Egyptian origin of the text which is in Syriac but gives the name of a Coptic month in the narrative (*cf.* note 3 on p. 453, and note 1 on p. 461); the author claims to be Serapion who was ordained by Timothy of Alexandria (380-5), and was bishop in Egypt under Theophilus (385-412); Serapion claims to have brought the relics of John the Baptist to Alexandria. Editor's preface (438-9), translation (439-64), text (465-96), facsim. (497-8).

Fasc. IV of the same, in *Bull. J. Ryl. Libr.*, XII (1928), 411-580, contains (i) *Lament of the Virgin*, introd. by Mingana, who gives transl. of REVILLIOUT, *Évang. des douze apôtres* (P.O., II, 169-74): 459-88 Syriac text and trs. This Syriac text is closely related to the Coptic of the "Gospel of the Twelve" and supplies lacunae in it. (ii) *Martyrdom of Pilate*, introd. by Mingana (489-530), text (531-80). Both of these are ascribed to Cyriacus of Oxyrhynchus, they are obviously from a Coptic source and complete the fragmentary Coptic texts hitherto available. The Arabic text is already edited and published by Galtier. The *Woodbrooke Studies* have been reviewed in the *Expository Times* (1928), 202-3, without reference to the Coptic kinship, by D. H. D. in *R. Bénédicte*, XL (1928), 272, and by R. STROTHMANN in *Th. L.Z.*, LIII (1928), 518.

A. VAN LANTSCHOOT, *Les textes palimpsestes de B.M. Or. 8802*, in *Muséon*, XLI (1928), 225-47, gives the text and trs. of 6 leaves, with introductory note. Of these I, 2, 4 are fragments of an apocryphal narrative of SS. Peter and Paul; fo. 3 contains part of an homily on Mt. v. 23-4, and 2 Cor. xiii. 11; whilst fo. 5 gives the end of an edifying story about the conversion of a sinner, and fo. 6 contains a sort of gnostic commentary on Philipp. ii. 6-11.

The *Dent. L.Z.* (1929), 587-8, gives an account of C. SCHMIDT's text of the "Acta Pauli" recently brought to Berlin as well as the important Fayyumic biblical papyri. On these more detail appears in C. SCHMIDT, *Neue Fremde zur den alten ΠΡΑΞΕΙΣ ΠΑΥΛΟΥ*, in the *Berlin. Akad. Sitzungsberichte* (1929), Phil.-Hist. Klasse, VII, 176-83.

(c) *Gnosticism, etc.*

A. PUECH, *Histoire de la Littérature Grecque chrétienne*, Paris (1928), 2 vols., (i) 500, (ii) 668, contains a section on gnosticism (II, 235-59) without, however, any great emphasis upon Egypt and necessarily without reference to Coptic literature.

L. CERFAUX, *La gnose simonienne*, appears in *R. Sci. Relig.*, xv (1925), 489-511; xvi (1926), 5-20, 265-85.

P. HENDRIX, *De Alexandrijnsche Haeresiarch Basilides* (*cf. Journal*, 1927, 252), is briefly noticed by A. E. in *Byz. Z.* (1927), 450, more fully by LEISEGANG in *Phil. Woch.* (1927), 306-7.

We have already noted (above) the fragment of a gnostic commentary on Philipp. ii. 6-11, contained in B.M. Or. 8802 and published by VAN LANTSCHOOT. It seems possible that this fragment may have belonged to the apocryphal acta of SS. Peter and Paul contained in other leaves (1, 2, 4) of this MS.

C. SCHMIDT, *Pistis Sophia* (*cf. Journal*, 1925, 321), has been reviewed by A. VITTI in *Biblica* (1928), 108-10.

(d) *Manicheism.*

G. BARDY, *Manichéisme*, appears in *Dict. de Théol. Cath.*, fasc. 75-7 (1926), 1841-95.

E. WALDSCHMIDT-W. LENTZ, *Die Stellung Jesu in dem Manichismus*, Berlin (1926), 131, 4 illust., is reviewed by A. MEILLET in *Bull. de la Soc. de Linguist. de Paris* (1927), 100-1.

III. LITURGICAL.

(a) *Euchologion.*

G. MERCATI, *Un frammento della liturgia Clementina su papiro*, in *Aegyptus*, VIII (1927), 40-42, gives a passage from P. Rainer 19937 which proves to be the "Ante Sanctus" of *Apost. Const.*, VIII, xii, 6-7 (*ed. FUNK*, I, 496). Brief notice by F. Z. in *Byz. Z.* (1927), 427.

H. LIETZMANN, *Ein liturgischer Papyrus des Berliner Museums*, in *Festgabe f. A. Julicher zum 70. Geburtstag*, Tübingen (1927), 213-28. The Papyrus is Berlin P. 13918 and Heidelberg P. graec. 2: the contents give liturgical prayers from the latter part of the mass.

Journ. of Egypt. Arch. xv.

W. H. P. HATCH, *Three liturgical fragments from the Wadi Natrun and an unpublished Greek inscription from 'Amman*, in *Annual of the Amer. Schools of Orient. Res.*, VI (1925-6), 94-104. The first of these fragments is from the Euchologion.

M. ANDRIEU et P. COLLOMP, *Fragments sur papyrus de l'anaphore de S. Marc*, appears in *R. Sci. Rel. Univ. Strasb.*, VIII (1928), 489-515.

(b) *Synaxarium*.

R. BASSET, *Synaxaire Jacobite Copte*, in the *Patrologia Orientalis* receives its completion by the publication of additions, corrections, and very full indices of names of people and places, a work on which the lamented editor was engaged at the moment when overtaken by the illness which terminated in his death. This appears in *P.O.*, XX (1929), 741-89.

The close relation between the Egyptian Jacobite Synaxarium and that of the Ethiopic church necessarily draws attention to E. A. W. BUDGE, *Book of the Saints of the Ethiopian Church: a translation of the Ethiopic Synaxarium...from MSS. Or. 660 and 661 in the Brit. Mus.*, Camb. (1928), 4 vols., introductions (i) lxxxvii, (ii) xviii, (iii) xvi, (iv) xviii, the text (1333 pages) numbered continuously, (i) 1-308, (ii) -660, (iii) -953, (iv) -1333. It has been reviewed by A. W. in *J. Afr. Soc.* (1928), 418-9, a review of rather vague character.

(c) *Hymns*.

W. H. P. HATCH, *Three Liturgical Fragments* (cf. above), contains, as fragments 2 and 3, portions of the Theotokia for Sunday and Wednesday respectively.

C. DEL GRANDE, *Liturgiae preces hymni Christianorum e papyris collecti*, Neapoli (1928), 39, is reviewed by J. LEIPOLDT in *O.L.Z.* (1929), 366, and by J. KROLL in *Gnomon* (1929), 30-35.

D. O'LEARY, *Difnâr*, Part II, Lond. (1928), viii+119, gives the months of Tubeḥ, Amshir, Barmahat, and Barmudah, from the Vatican Codex Copt. Borgia 59. It has been reviewed by M. A. MURRAY in *Anc. Egypt* (1928), 30. Part I (cf. *Journal*, 1926, 307) is reviewed by P. P(ETERS) in *An. Bol.*, XLV (1927), 156-8; Part II, by S. GASELEE in *Bull. Sch. Or. Stud.* (1928), 172-3, by W. E. CRUM in *J.R.A.S.* (1928), 977-9, and by P. P(ETERS) in *An. Bol.*, XLVI (1928).

The article, *Hymnology of the Orthodox Church*, in *Bible Lands*, VII (1928), 902-9, gives an outline of Greek hymnology: it has an indirect bearing on Coptic religious poetry which, as Junker has shown, followed Byzantine models.

Music has distinct bearing upon the form and composition of hymns and in this field much can be learned from Byzantine music. Hence it is opportune to notice E. WELLESZ, *Byzantinische Musik*, Breslau (1927), 79, 16 plates: it has been reviewed by H. J. W. TILLYARD in *Byz. Z.*, XXVII (1927), 376-7.

H. J. W. TILLYARD, *A Canon by Saint Cosmas*, in *Byz. Z.*, XXVIII (1928), 25-37, has a general bearing on Byzantine music.

(d) *General*.

The important edition of Abu l-Barakat's "Lamp of Darkness," edited by Dom L. VILLECOURT, Mgr. E. TISSERANT, and M. G. WIET, appears in *P.O.*, XX (1928), fasc. IV, 597-734. This gives an introduction (597-618) and chapters I, II of the text, (i) dealing with Christian doctrine and the leading Christian sects, (ii) with the Nicene Creed, both largely compilations. The liturgical material follows later. H. MUNIER, *La Scala copte 44 de la Bibl. Nat. de Paris*, (i) *Transcription*, is announced as vol. II of the *Bibl. d'Études Coptes* of the *Institut Français d'Arch. Orientale du Caire*, but has not yet appeared.

IV. CHURCH LITERATURE AND THEOLOGY.

(a) *Patres Apostolici*.

A. NEPPI MODONA, *Un altro frammento papiraceo del Pastore di Erma*, appears in *Bilychnis*, XXX (1927), 177-8.

CAMPBELL BONNER, *A new fragment of the Shepherd of Hermas*, in *Harvard Th. R.*, XX (1927), 105-16, deals with the same, a passage from Michigan pap. 44, H.

W. H. P. HATCH, *The Apostles in the New Testament and in the Ecclesiastical Tradition of Egypt*, in *Harr. Th. R.*, XXI (1928), 147-61, is largely concerned with the list of the apostles in the "Apostolic Church Order," and with the Egyptian idea that Peter and Cephas were two different persons.

(b) *Later Patristic Writings.*

A. VAN LANTSCHOOT, *Lettre de S. Athanase au sujet de l'amour et de la tempérance*, in *Muséon*, XL (1927), 265-92, gives a text (Safidic) not found in the Greek, from B.M. Or. 8802, of the same codex as B.M. Or. 3581 (A), 13, Paris copte 131¹, 37, 67, J. Rylands 62, 85 and Clar. P. 25.

TH. LEFORT, *Le "de virginitate" de S. Clément ou de S. Athanase*, in *Muséon*, XL (1927), 249-64, gives a text from Paris copte 131¹, 2-7.

G. BARDY, *Clément d'Alex.* (cf. *Journal*, 1927, 255), is reviewed by J. SIMON in *An. Bol.* (1928), 165-6; and by J. LEBRETON in *R.S.R.*, XVII (1927), 351-2.

H. ST. J. THACKERAY, *A papyrus scrap of Patristic Writing*, in *J.T.S.*, xxx (1929), 179-90 (one facsimile) gives a fragment which the editor suggests may be from Clement of Alexandria.

J. ZELLINGER, *Studien zu Severian von Gabala*, Münster (1926), viii+182, only cites titles of Coptic homilies except two fragments of a homily on St. Michael (= BHO. 761), trans. by W. Hengstenberg, which the writer says is spurious. But Pierpont Morgan, LI, xxv, 2, 3, 5, gives four complete homilies which seem to have escaped Z.'s notice, and the homily on Christmas in Paris copte 131¹, 30 might have been added. On account of this defective information about the Coptic versions the work is reviewed unfavourably by J. SIMON in *An. Bol.*, XLV (1927), 382-4. It is also reviewed by R. DRAGUET in *R.H. Eccl.*, XXIV (1928), 148-150.

F. ANDRES, *Die Engel- und Dämonenlehre des Klemens von Alexandrien*, appeared in *Röm. Quartalschr.*, XLIII (1926), 13-27, 129-40, 307-29.

A second volume of H. DE VIS, "Homélies Coptes" (cf. *Journal*, 1923, 229) is well on its way through the press.

P. DUDON, *La gnose de Clément d'Alexandrie interprétée par Fénelon*, appears in *R. d'asc. et de myst.*, Toulouse, VIII (1927), 300-12.

V. HISTORY.

(a) *General.*

J. ZEILLER, *L'empire romain et l'église*, Paris (1928), 361, makes reference to the Egyptian Church (pp. 153-74).

H. I. BELL, *Jews and Christians* (cf. *Journal*, 1924, 327), is reviewed by W. HENGSTENBERG in *Byz. Z.*, XXVII (1927), 138-45, by H. WILLRICH in *Deut. L.Z.* (1927), 150-1. *Juden und Griechen* (cf. *Journal*, XIII, 1927, 254) by J. VOGT in *O.L.Z.* (1927), 759-60, by BIECKERMANN in *Gnomon*, III (1927), 671-7, by M. HOMBERT in *Rec. Belge*, VI (1927), 860-1, by J. G. MILNE in *Journal*, XIII (1927), 124, and in *Anc. Egypt* (1927), 103.

H. CHAÎNE, *La Chronologie* (cf. *Journal*, 1926, 308), has been reviewed by H. SOTTAS in *R. Critique* (1927), 5-7, by W. E. VAN WIJK in *Museum*, XXIV (1926-7), 189, by G. DE JEPHARNION in *Orientalia Christiana*, Rome, XI (1928), 128-33.

At the XVIIth Congress of Orientalists at Oxford, in Section III, H. I. BELL, *Organization of Egypt under the Umayyad Khalifs*, read a paper containing interesting notes on the condition of the Christian populace under the early Muslim rulers. The paper is published in *Byz. Z.*, XXVIII (1929), 278-86.

W. EUSLIN, *Ein Prozessvergleich* (cf. *Journal*, 1927, 254), is reviewed by F. Z. in *Byz. Z.*, XXVII (1927), 177-8.

D. GORCE, *Les Voyages*, and *Lectio Divina* (cf. *Journal*, 1927, 255), has been reviewed by A. BOON in *R.H.E.* (1927), 561-3 (lectio div.), 563-4 (voyages), and by P. DE LABRIOLLE in *R. Critique* (1927), 326-8.

H. JANIN, *Les Églises Orientales* (cf. *Journal*, 1927, 254), is reviewed by R. DRAGUET in *R.H.E.*, XXIII (1927), 699-700, and by S. SALAVILLE in *Échos d'Orient*, xxx (1927), 246.

A. KAMMERER, *Essai* (cf. *Journal*, 1926, 308), is reviewed by D. S. M. in *Eng. Hist. Rec.*, XLII (1927), 639-40, by C. CONTI ROSSINI in *Oriente Moderno*, VI (1926), 342-6, by A. VITTI in *Biblica*, VIII (1927), 238-41.

J. CROWFOOT, *Christian Nubia*, appears in *Journal*, XIII (1927), 141-50.

W. E. CRUM, *Further Meletian Documents*, appears in *Journal*, XIII (1927), 19-26.

EV. BRECCIA, *Juifs et chrétiens de l'ancienne Alexandrie*, Alexandria (1927), 30.

S. H. SCOTT, *The Eastern Churches and the Papacy*, Oxford (1928), 404, examines the constitutional position of the "separated" churches, but is mainly concerned with the Greek Church. It is reviewed in the *Month* (1928), 368-9, by R. DRAGUET in *R.H.E.*, XXV (1929), 93-6.

F. HAASE, *Altchr. Kirchengesch. nach orient. Quellen* (cf. *Journal*, 1926, 308), is reviewed by A. EHRHARD in *Byz. Z.* (1927), 398-400.

K. BETH, *Forschungsreise zur koptischen Kirche*, in *Forschungen und Fortschritte*, Berlin, v (1929), 54-5, gives a brief but interesting account of the Coptic church, recent "reform" movements, and its monasticism with special reference to the monastery of Mâr Antûn in the eastern desert (2 illustr.).

B. J. KIDD, *The Churches of Eastern Christendom*, Lond. (N.D.), 549, deals incidentally with the Copts (425-53): it is a reliable and accurate compilation, but contains nothing very fresh.

A. ANWANDER, *Die Alexandrinische Katechetenschule und Indien*, appeared in *Theol. Quartalschr.* (1928), 257-84.

At the XVIIth Congress of Orientalists, Prof. F. LL. GRIFFITH read a paper on *An Old Greek Colony in Upper Egypt*, suggesting the derivation of Ⲭⲩ from ⲕⲟⲓⲛⲏ: the paper was criticized by Prof. Hess.

C. DIEHL, *L'administration civile de l'Égypte Byzantine*, Paris (1928), xv+268, 8 plates, 27 figs., is a second (revised) edition of a work already known.

E. A. W. BUDGE, *A history of Ethiopia, Nubia, and Abyssinia*, Lond. (1928), 2 vols., (i) xxx+336, 1 map, 25 plates, 31 illustr., (ii) viii+337-675, 24 plates, 10 illustr., covers material indirectly bearing upon the Egyptian Church.

(b) *Monastic.*

H. CHAÎNE, *La double recension de "L'histoire Lausiacque" dans la version copte*, appears in *R.O.C.* (1925-6), 232-75.

M. WEYNANTS-RONDAY, *Paradis égyptiens*, appears in *Chron. d'Égypte*, v (1927), 52-77.

DOM ANTONI RAMON, *Palladi Historia Lausiaca*, Barcelona, 1927, xlii+125, is a very attractive new edition of the Lausiaca History with a Spanish translation and introduction. It is interesting to note that it forms the 24th volume of a series of Greek and Latin texts and so far is the only one of an ecclesiastical character. The text is well printed and there is a satisfactory critical apparatus.

Amongst the papers read at the XVIIth Congress of Orientalists was A. FISCHER, *Christliche Kloster in muslimischen Ländern*, which the author described as having a good influence in fostering art, but a bad influence as providing a resort for drinking free from the Islamic prohibition of wine. Prof. A. BEVAN suggested that part of this thesis was based on a misconception of a passage from Yaqut, which Prof. Fischer denied. A good synopsis of this paper is given in *Deutsch. L.Z.* (1929), 689.

(c) *Hagiography and Biography.*

W. E. CRUM, *Die koptische Uebersetzung des Lebens Symeons des Styliten*, appears in *Z. Neut. W.*, xxvi (1927), 119-28: it has been reviewed by P. P(ETERS) in *An. Bol.* (1928), 182-3, and briefly noticed by F. Z. in *Byz. Z.* (1927), 427.

H. D(ELEHAYE), *La personnalité...S. Paul de Thèbes* (cf. *Journal*, 1926, 309), is briefly noticed by F. Z. in *Byz. Z.* (1927), 191.

A. PREMIERSTEIN, *Zu den sogenannten alexandrinischen Martyrerakten* (cf. *Journal*, 1923, 231), has been reviewed by F. BILABEL in *Phil. Woch.*, XLVII (1927), 836-9.

DOM P. CH. BAUR, "Georgius Alexandrinus," in *Byz. Z.*, XXVII (1927), 1-16, is a study in the life of George who was patriarch between 617 and 625.

E. AMANN, *Macaire d'Égypte*, appears in *Dict. de Théol. Cath.*, fasc. 75 (1926), 1452-5.

K. ZWIERZINA, *Der Pelagiatypus der fabulösen Martyrerlegende* (*Nachr. v. der Gesellsch. der Wiss. zu Göttingen*, Phil.-Hist. Klasse, 1928, 130-56) contains a careful examination of the monachus-femina legend which figures so prominently in Coptic hagiology and is associated with such as Pelagia-Marina-Maria/Marina, Margarita/Pelagius-Euphrosyne/Smaragdus, Anthusa-Eugenia/Eugenius, Apollinaris/Dorotheus, Susanna/Joannes, etc. The life of one of these appears in A. HILKA, *Une vie inédite de sainte Marina*, in *An. Bol.*, XLVI (1928), 68-77, but contains no reference to any Coptic material.

VI. NON-LITERARY TEXTS.

(a) *Collection of texts.*

M. HOMBERT, *Quelques papyrus des collections de Gand et de Paris*, in *Rev. Belge de Philol. et d'Hist.*, iv (1925), 633-76, reprinted Paris 1925, is reviewed by E. KUHN in *O.L.Z.*, xxx (1927), 1064-5, and by SCHUBART in *Phil. Woch.* (1927), 16-17. The same writer's *Acquisitions nouvelles dans le domaine de la papyrologie grecque*, appeared in *Chron. d'Égypte*, iv (1927), 192-4.

H. J. M. MILNE, *Catalogue of the Literary Papyri in the Brit. Mus.*, Lond. (1927), xvi+243, 20 illustr., has been reviewed by A. C(ALDERINI) in *Aegyptus*, VIII (1927), 380, by J. SYKURIS in *Deut. L.Z.*, XLIX (1928), 1507-9, by B. v. GRONINGEN in *Museum*, XXXVI (1929), 89-90, and by W. MOREL in *Phil. Woch.* (1929), 132-7.

A. VAN LANTSCHOOT, *Rec. des colophons des MSS-chrétiens d'Égypte*, Louvain, 1929, xviii+153 gives 126 Saïdic colophons with indices, etc.

(b) *Separate Documents.*

H. I. BELL, *Two Official Letters of the Arab Period*, in *Journal* (1926), 265-81, is briefly noticed by F. Z. in *Byz. Z.* (1927), 179-80.

M. A. MURRAY, *A Coptic Ostrakon*, appears in *Anc. Egypt* (1927), 97.

P. JERNSTEDT, *Der koptische Brief "Ancient Egypt," 1927*, p. 97, in *O.L.Z.* (1928), 1037-8, gives text and translation of the letter described by Miss M. A. Murray in the issue of *Anc. Egypt* already cited.

A. ARTHUR SCHILLER, *Coptic Ostraca of the New York Historical Society*, in *J. Amer. Or. S.*, XLVIII (1928), 147-58, gives 8 ostraca with translations, notes, and a general introduction. No. 2 contains a request to write the lives of Saints Athanasios, Dioscoros, and Severos.

A. SCHILLER, *A Coptic Dialysis*, in *Tijdschrift voor Rechtsgeschiedenis*, Haarlem (1927), 432-53, is a translation and examination of No. 38 of CRUM-STEINWENTER, *Koptische Rechtsurkunden aus Oberägypten* (1920). *Διάλυσις*=transactio (Ulpian, Dig. 2. 15. 1): the form used resembles the "tabellio" (Nov. Just. XLVII). An interesting type of Coptic legal document.

A. MALLON, *Quelques ostraca coptes de Thèbes*, appears in the first number of the *R. de l'Ég. Anc.* (1927), 152-6.

(c) *Science.*

J. RUSKA, *Tubula smaragdina. Ein Beitrag zur Geschichte der hermetischen Literatur*, Heidelberg (1926), VII, 246, seems to regard Coptic chemical studies as the medium through which the Arabs learned the chemistry of ancient Egypt: but in fact every known Coptic treatise on chemistry shows Arabic influence and is obviously of date subsequent to the Muslim conquest. The work has been reviewed by J. A. VOLLRGAF in *Museum*, XXXV (1928), 129-30, and by J. BIDEZ in *R.B.P.H.*, VII (1928), 280-2.

E. J. HOLMYARD, *An alchemical Tract attributed to Mary the Copt*, in *Arch. St. Sc.*, VIII (1927), 161-8, is an interesting contribution to the history of Arabic chemistry but has no real bearing on Coptic literature.

(d) *Magic.*

S. EITREM, *Les papyrus magiques grecs de Paris* (cf. *Journal*, 1926, 310), is reviewed by A. DELATTE in *Rev. Belge de Philol.*, VI (1927), 549-52, the same writer's *Papyri Osloenses*, I, by R. JOUGUET in *J. Sav.* (1929), 32-3, and by P. THOMSEN in *Phil. Woch.* (1928), 565-6.

L. ST. P. GIRARD, *Un fragment de liturgie magique copte sur ostrakon*, appears in *Ann. Serv.*, XXVII (1927), 62-8. It gives a fragment of 41 lines on a potsherd now in the Egyptian Museum at Cairo, from Mazoura in the province of Beni-Souef. G. gives "le texte original dans son incorrection," a transcription, and notes.

A. SCHILLER, *A Coptic charm, Columbia Coptic Parchment, n.l.a.2*, in *J.S. Or. Res.*, XII (1928), 25-34.

F. LEXA, *La Magie* (cf. *Journal*, 1927, 259), has been reviewed by A. WIEDEMANN in *Arch. Orientforsch.*, IV (1927), 164-5, by E. POWER in *Biblica*, IX (1928), 241-2, by F. CUMONT in *Rec. Belge Phil.*, VI (1927), 459-60, by H. BONNET in *Z.D.M.G.*, LXXXI (1927), 175-7, in *Bull. Bibl. Pédag.*, XXXI (1927), 130-1, by H. KEES in *O.L.Z.*, XXXI (1928), 102-4, by G. ROEDER in *Gnomon* (1928), 196-202, by R. MOUTERDA in *Mél. de l'Univ. St. Joseph*, XII (1927), 276-7, by E. DE JONG in *Museum*, XXXV (1928), 303-4, and by W. TILL in *Wiener Z. f. d. Kunde des Morgenlandes*, XXXIV (1927), 291-3.

VII. PHILOLOGY.

F. CALICE, *Zur Entwicklung des U-Lautes im Ägyptischen und Koptischen*, in *Z.A.S.*, LXIII (1928), 141-3. The same writer's *Die Entstehung der koptischen Eigenschaftsverben*, *ibid.*, 143-4.

At the XVIIth Congress of Orientalists at Oxford W. E. CRUM described the *New Coptic Dictionary*, and showed specimen pages. The chief feature will be a very large collection of examples illustrating the use and meaning of words: it does not deal with their derivation. A very warm welcome to this work was expressed by Prof. Steindorff and Prof. Spiegelberg. The Dictionary is to be in five parts of which Part I (A-EI) appeared in February 1929 (pages xii+88). It is hoped that the remaining four parts will appear at intervals of one to two years. It is published by the Clarendon Press, Oxford.

W. CZERMAK, *Rhythmus und Umbildung im Ägyptisch-Koptischen*, in *Z.Ä.S.*, LXII (1927), 78-89.

R. EBBELL, *Die Ägyptischen Krankheitsnamen*, in *Z.Ä.S.*, LXII (1927), 71-5, **ⲟⲩⲁⲙⲉⲧ**, **ⲟⲩⲁⲙⲉⲧ** = cancer uteri.

W. EDGERTON, *A clause in the marriage settlements*, in *Z.Ä.S.*, LXIV (1929), 59-62, contains a few passing references to Coptic words.

A. GARDINER, *An Egyptian Split Infinitive and the origin of the Coptic Conjunctive Tense*, appeared in *Journal* (1928), 86-96.

L. KEIMER, *Sprachliches und Suchliches zu EAKΩ "Frucht der Sykomore"*, in *Acta Orient.*, VI (1928), 288-304, has some Coptic bearing.

M. A. MURRAY, *Elementary Coptic (Sahidic) Grammar* (1927), lx+88, is a second edition of this useful work. It has been reviewed by W. TILL in *O.L.Z.* (1928), 689-90.

H. RANKE, *Miscellen*, in *Z.Ä.S.*, LXIII (1928), 149-50, on *h-t* and **g*ω in **ⲛⲉⲕⲟⲱ**.

K. SETHE, *Zum Namen Pharabaitos*, in *Miscellen*, *Z.Ä.S.*, LXII (1927), 99, refers to the Delta town **Φαράβαι**. The same writer's *Zu Ä.Z.* 62. 83 ff. in *Z.Ä.S.*, LXII (1927), 99-101, deals with the prototype of **ⲟⲩⲉⲧ** - "ein anderes ist..."

K. SETHE, *Das Verhältnis zwischen Demot. u. Kopt.* (cf. *Journal*, 1926, 310), is reviewed by CH. KUENTZ in *Bull. Soc. Linguist. Paris*, XXVIII (1928), 246-8. The same author's *Zur Erklärung der kopt. Nominalverben der Eigenschaftswörter* appears in *Z.Ä.S.*, LXIV (1929), 63-4.

W. SPIEGELBERG, *Zu der Pluralbildung auf é im Koptischen*, appears in *O.L.Z.* (1927), 655-7. The same writer's **ⲉⲓⲛⲛⲉⲓ** = *ἱππῆς* in *Z.Ä.S.*, LXII (1927), 47, and this has been noted by F. D. in *Byz. Z.*, XXVII (1927), 183. *Zu 'is*, **ⲟⲩⲥ** "kahl" in *Z.Ä.S.*, LXIII (1928), 154: **ⲉⲣⲣⲉ** (A) *hrdj-t* "Furcht," *ibid.*, 154-5: *Beirichtigung zu* **ⲓⲛⲧⲁⲓ ⲥⲉ** (A) "es ist es," *ibid.*, 155: **ⲥⲱ** "Binse, Matte," *ibid.*, LXIV (1929), 93-4.

A new (4th ?) edition of G. STEINDORFF, *Koptische Grammatik*, in the "Porta Linguarum" series is announced, but copies are not yet to hand.

W. TILL, *Indeterminierte Ausdrücke mit dem bestimmten Artikel im Koptischen*, in *Wiener Z. f. d. Kunde d. Morgenl.*, XXXIV (1927), 260-2. The same writer is responsible for *Bemerkungen und Ergänzungen zu den achmimischen Textausgaben*, in *Z.Ä.S.*, LXIII (1927), 90-98, and *Die Stellung des Achmimischen in Aegyptus*, VIII (1927), 249-57, - a general account of the characteristics of the Akhmimic and sub-Akhmimic dialects. W. TILL spoke at the XVIIth Orientalists' Congress on *Die Natur der Koptischen Doppelvokale*, citing such examples as S. **ⲉⲱⲧⲉ**, Akh. **ⲉⲱⲧⲉ**; S. **ⲟⲩⲛⲉ**, Akh. **ⲟⲩⲛⲉ**; S. **ⲉⲓⲟⲩⲣ**, Akh. **ⲓⲟⲩⲣⲉ**; S. **ⲙⲁⲁⲁ**, Akh. **ⲙⲁⲁⲁ**.

W. TILL, *Achmimisch-koptische Grammatik mit Chrestomathie und Wörterbuch*, Leipzig (1928), xxi+312 (autogr.), is of primary importance for the study of the Akhmimic dialect which the author describes as showing the earliest and basal type of Coptic. This view is opposed by K. SETHE in *Deutsche L.Z.* (1928), 1800-3, who regards Akhmimic as a later and decadent dialect showing only local peculiarities, a view taken also by G. STEINDORFF in his comments on W. TILL, *Die Natur der Koptischen Doppelvokale* (above), and by K. SETHE, *Bemerkungen zu W. Till's Achmimisch-K. Grammatik*, in *Z.Ä.S.*, LXIV (1929), 65-71.

W. TILL, *Akhmimisches*, appears in *Z.Ä.S.*, LXIII (1928), 144-9, and deals with four topics, (1) **ⲉⲓⲟⲩⲣⲉ**, **ⲁⲓⲁⲉ** *λεγ.* in Haggai ii. 1; (2) Der unverkürzte Status nominalis, as **ⲟⲩⲱⲉ** - from **ⲟⲩⲱⲉ** "lieben"; (3) Mischformen in Status Pronominalis; (4) Die ursprüngliche Vokalisation des zweiradikaligen Infinitiv. In the same periodical (LXIII, 1927, 90-98) we find this author's *Bemerkungen und Ergänzungen zu den Achmimischen Textausgaben*, dealing with (1) Steindorff, *Die Apoc. des Elias*, 1899; (2) C. Schmidt, *Gesprache Jesu*, 1919; (3) C. Schmidt, *Die erste Clemensbrief*, 1908; (4) Roesch, *Bruchstücke des ersten Clemensbriefes*, 1910; and (5) Lacau, *Textes coptes*, 1911.

VIII. ARCHAEOLOGY.

(a) Exploration.

K. BAEDEKER, *Aegypten und d. Sudan*, Leipzig (1928), CCII, 480, 21 maps, 85 plans, for which Prof. Steindorff is responsible, is the 8th edition of a work practically indispensable for every branch of Egyptology, though less interested in Christian remains than some of the older guide books. It has been reviewed by H. KEES in *Z.D.M.G.* (1928), 149-50, and by A. SCHARFF in *O.L.Z.* (1928), 687-9.

H. J. L. BEADNELL, *Wilderness of Sinai*, London (1927), XVI, 180, 20 illustr., 4 maps, is a record of original survey carefully and well done; some of the photographs are happy in giving a vivid idea of the actual scenery.

CRUM-WINLOCK-WHITE, *The Monastery of Epiphanius at Thebes* (cf. *Journal*, 1927, 257), has been reviewed by W. SPIEGELBERG in *O.L.Z.* (1927), 678-9, by I. GUIDI in *Oriente Moderno*, VII (1927), 401-2, by P. P(EETERS) in *An. Bol.*, XLV (1927), 392-8 (with WHITE, *Mon. of the Wadi 'n-Naṭrân*, cf. below), by H. LECLERCQ in *Journal*, XIII (1927), 125-7, by A. VAN LANTSCHOOT in *R. H. Eecl.*, XXIV (1928), 143-8, by É. DRIOTON in *R.O.C.*, XXVI (1927-8, 219-23, by A. CALDERINI in *Aegyptus*, IX (1928), 154-7, by LIETZMANN in *Gott. Gel. Anzeig.* (1928), 112-18, by C. SCHMIDT in *Deutsche L.Z.* (1928), 1701-4, by F. LL. GRIFFITH in *Eng. Hist. R.*, XLII (1927), 601-3, by H. LEFORT in *Muséon*, XL (1927), 153 ff., by H. HYVERNAT in *Amer. Hist. R.* (1927), 565, by A. MORET in *R. Crit.* (1928), 250-4, by GOODSPEED in *J. of Relig.* (1927), 482, by BOAK and WORRELL in *J. Amer. Or. S.*, XLVII (1927), 85-7 (with A. M. LYTHGOE, *Eg. Expedition*, 1926, report), by H. JUNKER in *Wien. Z. f. d. Kunde d. Morgenl.*, XXXIV (1927), 288-90, and a brief note by F. Z. in *Byz. Z.* (1927), 427.

LABIB ḤABSIY and ZAKI TĀWPRĒS, *Fi Ṣaḥrā' il-'Arab il-'Adirāt iṣ-Ṣarḡiqa* (in the Arabian desert and the Eastern Monasteries), Cairo (1929), 192, 4 plans, 30 illustr. After an introduction (8-46) dealing with the histories of the monasteries of the eastern desert, the authors describe a journey made eastwards across the desert to the Red Sea and a visit to the two great eastern monasteries. Ch. I gives an account of the journey to the Dér Antumus (47-63), II describes that monastery (64-127), III the route thence to Dér Bula (128-36), IV the Dér Bula (137-55), V the routes to the Red Sea coast (156-68), VI general notes about the monks and their present condition (169-79), and VII the route followed on the return journey (180-90). This is followed by a fair index (191-2). Such a work by Coptic authors is welcome and a distinct addition to our knowledge of the Coptic monasteries.

K. BETH, *Forsch. zu Kopt. Kirche* (cf. v. (iv) above) also describes the Dér Antūn.

F. LL. GRIFFITH, *Oxford Excavations in Nubia*, XLIX-LV, plates xl-lxxx, continued in *Annals of Archaeology and Anthropology*, XIV (1927), 57-116, includes ch. LII, "The Anchorite's Grotto" with a number of Coptic inscriptions including the Abgar letter, a passage from the Lausiac History, monastic precepts, and five magical texts which occur also in the magical book of Leyden, and the Nicene Creed; ch. LIV contains notes on Christian remains at other places in the vicinity. The texts are given in plates lxvii-lxxiii, several frescoes in plates lxii-lxv. Vol. XII was reviewed by A. WIEDEMANN in *O.L.Z.* (1927), 168-9, vol. XIV by the same writer, *ibid.* (1928), 263-4, and by W. R. DAWSON in *Journal* (1928), 194-6.

F. LL. GRIFFITH, *Christian Documents from Nubia*, Lond. (1928), 30, 4 plates (*Proc. Brit. Acad.*, XIV) contains a paper communicated to the British Acad. on 23. 5. 28, in which Prof. Griffith treats (i) the inscription commemorating King George from the Wādī en-Naṭrân, on a circular tray of white marble; (ii) a legal document on leather; (iii) a graffito at Aṣwān naming King Kudanbes. The last of these is in corrupt Greek in old Nubian characters.

F. LL. GRIFFITH, *Oxford Excav. in Nubia*, LVI-LXI, in *Ann. Arch. and Anthropol.*, XV (1928), 63-88, with plates xxv-xlvi, is mainly occupied (LVI-LVIII) with the church at 'Abd el-Kādir near the Second Cataract and its paintings; LIX gives general conclusions, LX contents of plates. The final section (LXI) is a conspectus of the memoir on the Oxford excavations in Nubia. It is reviewed by A. WIEDEMANN in *O.L.Z.* (1929), 344-5.

H. MUNIER et M. PILLET, *Les édifices chrétiennes de Karnak*, in *R. de l'Ég. anc.*, II (1928), 58-88, 19 figs. in text, describes the remains of three chapels in the ruins at Karnak, and of three convents. Amongst these remains are fragments of Byzantine architectural details, graffiti, frescoes of Severus of Antioch and Colluthus, and a number of brief Coptic inscriptions; a series of square holes cut in the N. face of the VIIIth Pylon, it is suggested, may have sheltered the convent library. A copy of an inscription taken by W. Jowett in 1824, with restorations by W. E. Crum, is also given (p. 87), and from this we learn the names of a series of ten superiors who ruled over one of these Karnak convents. They seem to have been under obedience to the parent house of Dér el-Abyad.

H. E. WHITE, *Monasteries of the Wadi 'n-Naṭrân* (cf. *Journal*, 1927, 258), has been reviewed by A. VAN LANTSCHOOT in *R. H. Eecl.*, XXIII (1927), 557-61, the reviewer noting various errors, e.g., no. 4 is of date 917-18, not 914 as stated; no. 9 Theodosius is described as the scribe, in fact he was the donor, of the book. With CRUM-WINLOCK-WHITE, *Mon. of Epiphanius* (cf. above), by P. P(EETERS) in *An. Bol.*, XLV (1927), 392-8, who says: "E. W. venu sur le tard aux études coptes, ne s'était pas encore défait d'un certain penchant à les considérer comme une province indépendante et autonome des antiquités ecclésiastiques. Il y a des traces de cette inexpérience dans les prolégomènes et dans le commentaire de son édition" (p. 395). The same two works have been reviewed together by É. DRIOTON in *R.O.C.* (1928), 217-21. H. E. WHITE's book by D. O'LEARY in *Journal* (1927), and by W. TILL in *Wiener Z.K.M.*, XXXIV (1927), 317-18.

H. E. WHITE's "History of the Monasteries of the Wadī 'n-Natrūn" is now well through the press and will appear shortly. The same author's book on the architecture of these monasteries is on its way.

(b) *Art and Architecture.*

U. MONNERET DE VILLARD, *Amboni copti e amboni campani*, in *Aegyptus*, VIII (1927), 258-62, notes a Coptic type of ambo side by side with a Ravenna type in Italy, the former with one stair, the latter with two. The same author's *Les couvents près de Sohag* (cf. *Journal*, 1927, 258) has been reviewed in *Anc. Egypt* (1927), 101, and by A. GABRIEL in *Syria*, IV (1927), 257-61: the same author's *Descriz. generale del monasterio di San Sinone presso Aswan* (cf. *Journal*, 1927, 258), by A. CALDERINI in *Aegyptus*, VIII (1927), 376-7.

G. DE JERPHANION, *Bull. d'arch. chrét. et byzantine*, in *Orientalia Christiana*, Rome, XI (1928), 117-47, reviews DIEHL, *Manuel d'art byz.* (117-19), DALTON, *East Chr. Art* (119-21), PIERCE and TYLER, *Byzantine Art* (121-3), U. M. DE VILLARD, *Couv. près de Sohag* (134-7), and BREHIER, *L'art chrétien* (144-7).

F. W. VON BISSING, *Altchristl. Wandmalereien aus Aegypten*, appeared in *Festschr. Clemens* (1926), 181-8.

C. DIEHL, *L'art chrétien primitif et l'art byzantin*, Paris (1928), 64, and 64 plates, has been reviewed by E. B. in the *Burlington Mag.* (1928), 102, a very brief notice.

C. DIEHL, *Manuel d'art byz.*, 2nd edition, is reviewed by O. WULFF in *Byz. Z.* (1928), 146-55, by P. GRAINDOR in *Byzantion*, III (1926), 456-7, and by G. DE JERPHANION (above).

G. STUHLFAUTH, *Die apokryphen Petrusgeschichten in der altchristlichen Kunst*, Berlin (1925), VII, 139, has been reviewed by H. W. BEYER in *Deutsch. Lit. Z.* (1927), 1358-63.

C. K. WILKINSON, *Early Christian Paintings in the Oasis of Khargeh*, in the *Bull. of the Metrop. Museum of Art*, N.Y. (1928), sect. II, 29-36, 8 figs., describes the paintings in a group of tomb chapels, one of the three great groups of Coptic paintings known to exist apart from the catacombs of Alexandria. The writer gives reasons for supporting the date (late 4th-early 5th cent.) given in WULFF's *Altchrist. u. byzant. Kunst*, in preference to the later date suggested by Dalton. The art is "derived from many sources, Greece, Syria, Persia and Egypt having each contributed details of ornament. The style is no less mixed, and, though the Greek influence is still very strong, there are signs that it is on the wane" (p. 36).

M. SULTZBERGER, *Note sur la croix chrétienne en Égypte*, appeared in *Byzantion*, IV (1927), 303-4; it is supplementary to an article on the oriental use of the cross which omitted to notice Egypt.

DALTON, *East Christian Art* (cf. *Journal*, 1926, 311), has been reviewed by R. GRAINDOR in *Byzantion*, III (1926), 448-54.

W. F. VOLBACH, *Neuerworbene Kopt-Holzschnitzereien in Rom. Germ. Central-Mus.* in *Mainzer Z.*, XXIII (1928), 41-4 (1 fig.).

ZUNTZ, *Eine Vorstufe der "Madonna Lactans,"* in *Berliner Museen* (1929), 32-35 (3 figs.), deals with Coptic representations of the Madonna and child.

(c) *Textiles.*

M. S. DIMAND, *Egypto-Arabic textiles, recent accessions*, in *Bull. Metrop. Museum of Art*, N.Y., XXII (1927), 275-9, 10 figs. The earliest of these is Tulunid, others are of the 11th cent. Four fragments of knotted rugs from Fustat. These all seem Muslim, but Coptic styles and methods of weaving continued in Muslim times.

M. S. DIMAND, *Die Ornamentik der Aeg. Wollwirkereien* is reviewed in *J. Amer. Or. Soc.*, XLVII (1927), 271-2.

E. KÜHNEL, *Islamische Stoffe aus ägypt. Grabern*, Berlin (1927), 90, 50 figs., is reviewed by M. MEYERHOF in *O.L.Z.* (1928), 401-4.

WULFF und VOLBACH, *Spatantike u. kopt. Stoffe* (cf. *Journal*, 1927, 259), has been reviewed by E. WEIGAND in *Byz. Z.*, XXVII (1927), 162-4.

W. F. VOLBACH, *Eine Koptische Tunika* in *Fest. Central-Mus. zu Mainz* (1927), 5 (8 figs.) describes a tunic at Mainz and kindred ones at Cairo and Berlin.

(d) *Folklore.*

W. S. BLACKMAN, *The Fellahin of Upper Egypt...with special reference to survivals from ancient times* (1927), 331, 1 plate, 186 illustr., foreword by R. R. MARETT, makes incidental reference to the Copts (p. 83, etc.). It has been reviewed by T. E. PEET in *Journal*, XIV (1928), 197-8, by C. A. G. M. in *J. Central Asian Soc.*, XV (1928), 469-72, by M. MEYERHOF in *O.L.Z.*, XXXI (1928), 602-4.

C. A. WILLIAMS, *Oriental affinities of the legend of the hairy anchorite*, appeared in the *Univ. of Illinois Studies*, May 1925, and Nov. 1926, but I have not been able to see a copy. It is reviewed by G. A. v. d. BERGH VAN EYSINGA in *Museum*, xxxv (1928), 217-18.

IX. GENERAL.

A. VAN LANTSCHOOT, *Cotation du fonds copte de Naples*, in *Muséon*, xli (1928), 217-24, gives the numeration of Zoëga as compared with the catalogue numbers in the Royal Library at Naples.

A new periodical, *Kemi*, has appeared 1928 which is described as "Revue de philologie et d'archéologie égyptiennes et coptes," but in the two numbers as yet issued nothing Coptic appears.

At the XVIIth Congress of Orientalists J. CAPART in *La Fondation Égyptologique Reine Élisabeth* described this institution as aiming at the encouragement of Egyptological work generally, Coptic subjects included.

C. LAGIER, *Plagiaires ou non?*, in *Chronique d'Égypte*, vi (1928), 159-72, deals with a charge made by Champollion-Figeac in 1842 that Rosellini and Ungarelli had used his material in preparing their grammars. The writer considers various letters and journals of Rosellini, Champollion le jeune, and Ungarelli recently published in the Proceedings of the *R. Accad. dei Lincei* (tirage à part, 1926).

The death of the Patriarch Kyrillos V was made known in November 1927. Rumour related that his death had taken place some time before, but had been concealed. He was born in 1830 and appointed patriarch in 1875. After his death bishop Yuhannes of Alexandria was appointed deputy, pressure being brought, it is said, by the government, a matter very much resented by the Coptic community, the common belief being that the matter was due to British influence. This deputy has since been made patriarch as Juhanes XIX. The translation of a bishop is, of course, in violation of the Nicene canons.

The Greek (Melchite) patriarch of Alexandria kept Christmas of 1928 on December 25th by Western reckoning, an innovation much resented by the more conservative members of his flock, many of whom preferred to attend the Coptic churches where the festival was observed according to the old calendar.

The *Observer* for 16. 6. 29 contained an interesting note about the controversy connected with the election and consecration of Kommos Sidaros, sub-prior of Dêr Antûn, as Archbishop of the Abyssinian Church. Disputes, it appears, have lasted over two years and at one time threatened to produce a rupture between the Coptic and Abyssinian churches.

NOTES AND NEWS

In choosing Mr. Robert Mond for its new president the Society has made a decision which will be readily approved by all who have the advancement of Egyptology at heart. His interest in the subject goes back more than a quarter of a century, and has from the first taken a practical form. The present state of preservation of the nobles' tombs in the Theban Necropolis owes far more than is generally known to his forethought and his liberality. Our Society has recently had special reason to be grateful to his generosity, for not only has he turned over to us his rights in the Armant site, but he has also himself borne the larger part of the expense of its excavation. We hope that under his presidency the Society may come to assume that place in the development of Egyptian archaeology which it ought rightly to occupy.

It is with great regret that we announce the resignation of Dr. H. Frankfort from the Directorship of the Society's excavations. He has accepted a post as Field-Director of the Iraq expedition of the Oriental Institute of the University of Chicago, and will take over his new duties this winter. We wish Dr. and Mrs. Frankfort every success in their new field, and at the same time hope that the change will not cut them off altogether from Egyptological work.

Dr. Frankfort's loss is a serious one for the Society. Up to the time of writing it has been impossible to find a Director for the work at Armant in the coming season. It had been hoped to persuade Mr. Emery to carry on there, but he has just accepted the Directorship of the Nubian Survey from the Egyptian Government. The possibility of working at El-'Amarnah this season depends on the amount of money raised for that purpose—apart from the question of a Director. The Society has, however, every intention of excavating at Armant if a suitable excavator can be found to take charge of the work.

An exhibition of antiquities from last season's work at Armant and El-'Amarnah was held in the Swedenborg Hall from July 6th to 19th, and was fairly well attended, though naturally it did not attract as many strangers as we are accustomed to have when our exhibitions are held at Burlington House. The hall was well lighted, and the objects, which were fully labelled, made a very attractive show. *The Illustrated London News* devoted two pages of two separate issues to the publication of the main finds, and during the course of the exhibition Dr. Frankfort delivered in the Meeting Room of the Royal Society a lantern lecture on the season's work which was enthusiastically received by a crowded audience. All the antiquities which were on show have now been distributed among the various museums interested in the Society's work.

Thanks to the liberality of Mr. John D. Rockefeller, jun. the work of the *Archaeological Survey* has now been placed on a sound financial basis, and there is every prospect that the publication of the Seti temple at Abydos will become one of the most important of

our Society's achievements. Mr. Rockefeller visited the temple in February last, and so much admired its wonderful sculptures and Miss Calverley's copies of them that he expressed to Professor Breasted his desire to help in the work, or at least to see that funds were forthcoming to enrich the publication with a considerable number of coloured plates. As a result of the discussions between Professor Breasted and Dr. Alan Gardiner, the proposal was made that the expedition should become a joint undertaking of the Egypt Exploration Society and of the Oriental Institute of Chicago University, the organization and execution remaining, however, in the hands of our Society. On these and certain other very favourable conditions, Mr. Rockefeller undertook to provide no less a sum than £21,000. This proposal was most gratefully accepted by the Committee. The field-work is to begin again early in October, and there is every reason to think that the entire material for a first volume, comprising the contents of the seven central chapels, will be ready by the end of the season. Miss Calverley is to be assisted by Miss Broome, formerly on Sir Flinders Petrie's staff, and by Mr. Beazley, who has been working with Mr. Casson in Constantinople.

A series of lectures for the winter has been arranged. The lecturers will include Mr. John Johnson, of the Oxford University Press, on Papyrus-hunting; Dr. H. J. Plenderleith on the Restoration and Preservation of Antiquities; Miss Garrod on her recent excavations in the Athlit caves; and Professor Griffith on Christian Nubia. In November, instead of a lecture, there will be a *soirée* at the Wellcome Historical Medical Museum by kind invitation of Mr. Wellcome, at which the President hopes to meet members of the Society.

The death of Eugène Dévaud at the early age of 51 is a serious loss to Egyptology and to the study of Coptic. Attracted to Oriental studies at an early age, the young Swiss scholar pursued his researches with a devotion and perseverance which slender means, serious domestic difficulties, and a far from robust constitution were utterly unable to daunt. For some time he studied with Professor Loret at Lyon, thence moving to Berlin, and finally returning to his native town of Fribourg, where he at last found a lectureship at the University. His chief interest was, and remained to the end, the old Egyptian language, though in later years he found himself drawn more and more towards Coptic. His published works by no means adequately mark the industry and skill with which he collected materials. As a lexicographer he has had but few equals, yet his contributions to this field are only a small number of articles published in the *Sphinx*, the *Recueil de Travaux* and elsewhere. Perhaps his principal work is the edition of the text of the *Maximes de Ptahhotep* which appeared in 1916. Unhappily the commentary which he continually promised has never seen the light, but the illustrative material which he gathered for this purpose was very extensive, and there is hope that it may still be utilized. Among his more recent works were his *Études d'Étymologie Copte* (Vol. i, 1922), *L'âge des papyrus égyptiens hiératiques d'après les graphies de certains mots* (1924), and an edition of the Bohairic Psalter (*Psalterii Versio Memphitica*, published in collaboration with O. H. E. Burmester in 1925).

He had a wonderful memory, and as a teacher at his University dealt not only with Egyptian in its earliest and latest forms but even with Assyrian and Chinese. As a man Eugène Dévaud will long be remembered by his many friends for the great charm of his personality, largely due to his frank and simple nature and his incurable optimism even in face of the greatest difficulties. *Requiescat in pace.*

The appearance of the first part of Crum's *Coptic Dictionary* is an event equalled in importance and magnitude only by the recent publication of the Berlin *Wörterbuch* and Gardiner's *Grammar*. Every Egyptologist will endorse what has been said by Sir Herbert Thompson in the opening and closing paragraphs of his review of the work printed in this number.

By a singular coincidence no fewer than four of the Society's Honorary Secretaries have received fresh honours of one kind or another since our last number was published. Professor Alan Gardiner has been made a Fellow of the British Academy. Dr. H. R. Hall has been elected to an Honorary Fellowship at St. John's College, Oxford. Mr. H. I. Bell has become Keeper of the Department of MSS in the British Museum. Finally, our present Honorary Secretary, Mr. S. R. K. Glanville, has been elected to the Laycock Studentship in Egyptology at Worcester College, Oxford.

Professor P. E. Newberry has accepted, for three years, we believe, the Chair of Ancient History in the Egyptian University in Cairo. Despite its title, the Chair is in reality one of Ancient Egyptian History, and we hold the University fortunate in having found so distinguished a scholar to fill the vacancy.

Dr. A. de Buck has been appointed to a Lectureship in Egyptology at Leyden. We understand that this post will not prevent him from carrying on the work on the Middle Kingdom Coffin Texts to which his recent years have been so unsparingly and successfully devoted.

We learn from Cairo that Professor Golenishcheff has resigned from the Chair of Ancient Egyptian Language at the Egyptian University. We wish him many years of happy retirement, and hope that freedom from routine work may enable him to give to the world some of the vast store of knowledge which he has accumulated in his long study of Egyptian. He is to be succeeded by Dr. Selim Hasan, previously Professor of Egyptian Archaeology in the same University.

May the Editor again beg contributors to the *Journal* to try to save both his time and their own, as well as the Society's money, by sending in their MSS in as perfect a condition as possible, and by attention to the suggestions which have been printed with this end in view in *Journal*, x, 336-7 and xi, 108-9 and 334.

The Editor feels it his duty to point out the significant fact that the cost per page of authors' corrections in our articles on Graeco-Roman Egypt is less than one-third of that spent on corrections in articles on Dynastic Egypt; this is in no way due to the use of hieroglyphic type in the latter, for the corrections in this, now that Dr. Gardiner's Catalogue of his fount is available for use, are almost negligible. He hopes that writers on Dynastic Egypt will take this to heart.

The Bibliography of Ancient Egypt, which has been somewhat spasmodic in appearing of late, will, we hope, shortly reassume its pristine regularity. Professor Capart, to whom, with his assistants at Brussels, we owe this laborious work, has already sent in a further long instalment, which will be printed in our next number.

D. NIELSEN: *Handbuch der Altarabischen Altertumskunde*; I Band, *Die Altarabische Kultur*, Kopenhagen (1927), viii + 272, 76 figs.

This is the first volume of a "Handbuch" dealing with the culture of South Arabia and is to be followed by two other volumes containing a selection of inscriptions with translation, commentary and grammar. These later volumes will contain, it may be assumed, material from E. Glaser's collection now in the keeping of Professor Rhodokanakis and supplementary to the material in the *Corpus Inscr. Sem.* To these the present volume serves as a general introduction. The five chapters it contains are by four different hands, but this collaboration is more uniform than always is the case as all the contributors belong to one clearly defined school and may be described as Glaser's disciples. The general editor is Dr. D. Nielsen who contributes chapters I and V. Of these ch. I is a general introduction which gives a slight sketch of the earlier explorers but deals more fully with recent research. Ch. II is by Dr. F. Hommel, who must be regarded as the greatest living authority on South Arabia, but definitely committed to Glaser's theory that the Minaean and Sabaeen kingdoms were successive, as against the contention that they were contemporary, a controversy now perhaps approaching a solution in the admission of a period of over-lapping. This chapter is a serious contribution to our knowledge of the history of South Arabia, as anything by Dr. Hommel would be, but allowance must be made for championship of Glaser's theories. The chapter has very little bearing on Egypt beyond a passing reference to the use of the name *Musri*, and a note on the article "Egypt in the South Arabian Inscriptions" in the *Ebers-Festschrift, Aegyptiaca* (1897, 25-29). Ch. III is by Professor N. Rhodokanakis who is understood to have inherited Glaser's unpublished material. It deals with the evidence as to the social and institutional life of South Arabia, and here passing remarks show that most of the references to Egypt in the South Arabian inscriptions have to do with the trade routes of Ptolemaic and Roman times. Ch. IV, by Professor H. Grohmann, is peculiarly interesting as it provides a survey of the architecture, sculpture, art, and craftsmanship as known to us by extant buildings and objects, though far from being a full survey of available material. Here, perhaps, we find traces of Mesopotamian influence (? Abb. 68, 71, 76, etc.), slighter traces of Egyptian (? Ptolemaic), and very obvious proof of Graeco-Roman influence, including material imported from the Hellenistic world in the course of trade. In ch. V Dr. D. Nielsen deals with South Arabian religion, and this portion, it must be admitted, contains a good deal of conjectural matter. N. describes the Arabs as worshipping a trinity, a male moon, a female sun, and the planet Venus as their first-born son, like the Egyptian Osiris, Isis, and Horus. The moon worship of Harran and the Northern Semites is fairly well known, and most of the thesis is probable enough, but it contains weak elements which need fuller examination. It hardly seems possible, as yet at least, to reduce South Arabian mythology to a neat system. Surely it is rather a venturesome use of comparative religion to employ (pp. 210-211) an illustration from Lettish mythology to endorse a theory about South Arabian doctrine.

This "Handbuch" must be welcomed as the most serious contribution to South Arabian studies since the appearance of G. F. Hill's *Catalogue of Greek Coins of Arabia* in 1922; this is only what was to be expected from the distinguished specialists who have contributed to the work, and we must look forward to the volumes in which a body of material will be examined and explained, as is promised. To those volumes the present work is introductory, and in them we may reasonably hope to find the solution of problems which are at present under debate.

DE LACY O'LEARY.

F. LL. GRIFFITH: *Christian Documents from Nubia*. London, 1928. (From the *Proceedings of the British Academy*, Volume XIV.) 30, 4 plates.

This publication contains a communication made to the British Academy in 1928 by Professor F. Ll. Griffith, the leading authority on the archaeology of Nubia. It begins with a brief historical summary (1-2) and then proceeds to consider three inscriptions. The first of these is on a circular marble slab discovered by the late H. G. Evelyn White in the Wâdi Nâtrûn in 1921, which the discoverer suggested might have been a tray intended for the *eulogiae* or oblations accompanying the Eucharist (cf. the western *pain bénit*). It contains two texts, one in Greek, the other in Nubian. The latter is of 24 lines and so earns a place beside the four which are the only long texts so far known in Nubian. It commemorates King George, who was born in A.D. 1106, became king of the northern kingdom of Dongola in 1130, and died in 1153. In line 22 we find the month mentioned by the Coptic name. The second inscription is a legal document on leather discovered by Mr. T. Gray in 1923, which mentions King Basilius of Nubia (11th cent.?), and comes from the area between the second and third cataracts. Seven

legal documents from Nubia are already known (translations given here), five in Coptic, two in Nubian, but this is the first considerable text from the district between the 2nd and 3rd cataracts. The script differs in several details from that usual in Nubian. Early Nubian documents were in Sa'idic, but later, in Muslim times, this was replaced by Nubian. The third document in this collection is the copy of a graffito in the Dêr Apa Hatra at Aṣwân. The inscription, in debased Greek but written in Nubian letters, was copied by Professor Griffith in 1911 and published by him in 1913: this text is now checked by other copies made by M. Glédat in 1903, and by Professor Monneret de Villard in 1910. Soon after the 1911 copy was made the inscription was severely injured by heavy rains. This graffito is of date 7 April 1322 and mentions King Kudanbes of Dongola.

DE LACY O'LEARY.

Grundzüge der Nubischen Grammatik im Christlichen Frühmittelalter (Altnubisch), Grammatik, Texte Kommentar und Glossar, herausgegeben von ERNST ZYHLARZ (Deutsche Morgenländische Gesellschaft, *Abhandlungen für die Kunde des Morgenlandes*, XVIII, Nr. 1), Leipzig, Brockhaus, 1928, xvi and 192.

It is a great pleasure to find a new student of Old Nubian and especially one so bold and successful as Dr. Zyhlarz. So far as the material available to him permitted he has here given us a complete grammar and glossary of the language together with an edition of the three principal texts, all packed with new ideas concisely expressed. According to him Nubian, showing remnants of syntactic suffixes, must no longer be considered an agglutinative language. The roots, mostly monosyllabic, may be freely compounded, and may be modified by a long series of suffixed vowels, consonants and monosyllables which give a variable and rather confusing appearance to the words, especially when assimilation has taken place. Apart from a certain amount of meaningless variation Zyhlarz attributes to each element a definite function (though not always convincingly as yet). So much for his grammatical work. As an interpreter he has made continuous sense of the difficult texts of the "Canons" and the "Cross," of the Berlin sale (of slaves) and of the more important of the graffiti, all of which defied anything like full interpretation in 1913, though few difficulties remained to be overcome in the bilinguals and the pellucid story of the miracle of Saint Menas. Many of the new readings can be accepted at once, such as the identification of the word for 40 which illuminates two dark passages; but where the unknown elements to be dealt with are numerous there is probably still much room for improvement. More parallel texts in other languages to constitute bilinguals, and large additions to the stock of Old Nubian literature itself are much to be desired.

A pupil of Dr. Junker in Vienna, Dr. Zyhlarz evidently unites insight into meaning with powers of combination and of close analysis, together with a feeling for the structure of a language. It will be interesting to see what he can make of two short texts published last year in the *Proceedings* of the British Academy. The reviewer observes with particular gratification the promise in his book of an article on Meroitic.

F. LL. GRIFFITH.

Egypt and the Sudan. Handbook for travellers by KARL BAEDEKER. With 106 maps and plans, and 56 woodcuts. Eighth revised edition. Leipzig, 1929. (London agents, George Allen & Unwin, Ltd.)

The eighth English edition of Baedeker's Egypt has followed the eighth German edition of 1928 with astonishing rapidity, and actually embodies some additions necessitated by the excavations of the past winter, 1928-29. The introductory matter of over two hundred pages forms a wonderful survey of Egypt from every point of view over a period of five thousand years: every section of it is written by an authority on his subject. Professor Steindorff, for example, is responsible for Ancient History, the Hieroglyphs and Ancient Religion, while Sir Henry Lyons writes on the Nile and the Climate, and Captain Cresswell on Islamic Architecture. It needs only a glance at the pages on Saqqârah, Tell el-'Amarnah and the Bibân el-Mulûk to show that the book is completely up to date. Nor will this surprise those who winter after winter observe the tireless energy with which Dr. Steindorff, who is responsible for its revision, toils up hills and down tomb-shafts, undeterred by the burden of years, in his search after truth.

A Coptic Dictionary compiled by W. E. CRUM. Part I: α - ϵ - ι - υ - η . (Oxford, Clarendon Press, 1929.)

At last we welcome the appearance of the first part of the new Coptic Dictionary which all Coptic scholars have been awaiting for many years. And it may be affirmed at once that it reaches the high

standard of scholarship which was expected of its author, and it more than fulfils all reasonable desires in the mass of new material that it contains. Peyron's *Lexicon* was published in 1835, so that very nearly 100 years have passed since the appearance of that great work, and since 1835 little has been done for Coptic lexicography in the Bohairic and Sahidic dialects. The work of Tattam and Parthey, of Kabis and Bsciai only made some additions to the vocabulary. In Achmimic, however, useful work has been done by glossaries to special texts by Steindorff, Rösch, Lacau and Carl Schmidt; these remain glossaries, however. Much valuable work in etymology has been done by Sethe, Spiegelberg, Dévaud (whose premature death is a serious loss to science) and others; but etymology is unfortunately excluded from the scope of the new Dictionary. What distinguishes the latter from Peyron is the wealth of illustrative examples given from published and unpublished sources. In order to enable this to be done, it has been necessary to compress the material into a narrow space and to make use of an extensive system of abbreviation. At a first glance, the appearance of the text is rather alarming, and a certain amount of trouble is necessary before full use can be made of the material presented; yet it yields, with the help of the elaborate list of abbreviations, to a short and careful study which it deserves, for much care has evidently been devoted to the consideration of its details.

Since Peyron's day the mass of new Coptic material that has come to light and that has had to be absorbed in this new work is very great. What Peyron had at hand was confined almost entirely to portions of the Bible and works of religious edification, sermons, encomia, biographies of Saints and martyrdoms. The new material has been extended by the discovery of a considerable number of legal documents, letters, accounts, etc., but otherwise the mass of it falls into the old limits of religious literature, practically all translations from the Greek with the exception of Shenoute. Profane literature is restricted to some medicine and a little alchemy, astrology and magic. Government decrees and laws were issued in Greek and no translations have come down to us; though we have some church canons. History is represented by fragments of the History of the Patriarchs of Alexandria. Of lighter literature, such as the old language has left us so many delightful examples, we have only a small fragment of the invasion of Egypt by Cambyses in a legendary form, fragments of the Alexander romance and some popular stories in verse, ballads in fact. Therefore the range of words is still limited owing to the absence of sections usually found in other literatures. *e.g.*, history, drama, fiction, poetry, philosophy, science, criticism. Further, the Coptic language suffers from being the handmaiden of Greek; with the exception of Shenoute and the legal documents all is translation and this makes it difficult for us to be sure how far any phrases and idioms are home-made or a literal rendering of the foreign tongue. Through Shenoute alone can we see how idiomatic and racy the native Coptic was, and occasionally how difficult to be understood for lack of a "crib." The result is our knowledge of the meanings of words is based in the main on the Sahidic versions of the Bible. In a far higher degree than Luther for German and the Revisers of 1611 for English did the unknown Coptic translators create a new tongue for their countrymen. When we consider that the earliest translation of at any rate the Psalms and Gospels probably dates back (as Lightfoot first had the courage to maintain) to the latter half of the second century A.D. and that the whole Bible was translated well before the end of the 3rd century (as we see from the famous papyrus acquired for the British Museum by Sir E. Wallis Budge and edited by him in 1912), we realize that, if the translators did not invent the Graeco-Coptic alphabet they availed themselves of the new instrument with amazing rapidity and genius. We have only to compare the clumsy use made of it in lay documents, such as the magical writers and compilers of horoscopes so late as the middle of the 3rd century. The difference is amazing.

The compiler of a Coptic lexicon who is primarily concerned with the meaning of words is so far fortunate in building on a translation in that he has a Greek equivalent or equivalents for every word in the Old and New Testaments of which the translation survives, with the context in which it occurs. Therefore Mr. Crum gives for every word so occurring the Greek original or originals and next non-biblical sources for such as have a Greek equivalent—and then come references to early gnostic texts, to Shenoute and later writers.

As soon as we turn to a word that does not occur in the Bible we realize the difference and we are met with notes of interrogation and confessions of ignorance.

With regard to Shenoute, Mr. Crum inserts *Sh.* before every quotation from his writings and those of his disciple *Besa*. This is an admirable idea and one that few scholars would have ventured to carry out. To know that Shenoute has used an idiom is to stamp it as the genuine native product.

Perhaps the most characteristic feature of the language is the large part played in it by prepositions and adverbs, simple and compound; as in English, most of the old inflexions have disappeared and are

replaced by prepositional phrases. In the present instalment we have **ε** and **ετθε** and the various adverbial compounds of **εωλ**. The latter are treated with admirable fullness.

ε might perhaps have received rather fuller treatment, *e.g.* though the usual preposition of direction towards places, it is very rarely used of persons (being replaced by **ωα**)¹; under III on p. 52, **ε** is used in the co-ordination of substantives as well as verbs; but these are trifles.

The principal verbs dealt with in this part are **εωκ**² and **εωλ**, **ει** and **ειρε**. **εωκ**, though a very common word, does not vary much in meaning. **εωλ** on the other hand serves a great variety of uses which are fully illustrated and make interesting reading.

Under **ει εση** a reference might be given to M.G. xxv. 140, **ερεπεεωλ πνοτ εσηνοτ** "what does its interpretation (of a parable) amount to?"

The article on **ειρε** affords us for the first time an idea of the extent and variety of its uses³.

In general it would be an advantage to have the qualitative form indicated or quoted in the examples and where it is possible, *e.g.* under **εωκ**, to have a statement that the qualitative form is used invariably in every tense in which it can be used, *i.e.* Pres. I and II circumstantial, Imperfect and nominal sentence, all those which are not compounded of an auxiliary and an infinitive; or again *s.c.* **ειρε** on p. 83, Col. i, 1b "become, befall" one would naturally expect these examples to be the qualitative, whereas they are all in the "infinitive" form.

When we turn to the smaller and rarer words, we are astonished at the multitude of them, and are grateful for the amount of new information to be found in the articles on *e.g.* **ατο** "multitude," **εκη** "darkness," **εκηρε** "inundation," **εατ** "end," **ιελλε** "brightness"; to name only a few specimens; excellent too is that dealing with the more familiar **ειοπε** "craft." The author has not, however, succeeded in clearing up the enigmatic **επιμ** "lot," which is perhaps a verb rather than a noun.

Though the scope of the work did not allow of the inclusion of foreign words, yet room has wisely been found for a small number of words on the border line—either words which have become nationalized and acquired an Egyptian complexion in the process, *e.g.* **αθασηειπ** (Persian?), **αρηε** (αγ. ἀραβών Semitic *cf.* new Liddell and Scott *s.v.*), **αλλωη** (ἀλόη?), **αριμ** (?), **εησε** (βήσις), **εηπαε** (πίναξ), **ετπι** (εὐνή?), **εμικ** (ἀτρίς?), **εηπ** (θείον), or others which may, or may not, be Coptic at all.

A perusal of the work so far gives a vivid idea of the wealth of Coptic idiom: and this is aided by the brief and pithy phrases in which the editor presents in English the context of the Coptic word under consideration.

It is not too much to say that the work will put the study of Coptic on a new and sure foundation, and our best wishes go out to the editor for a successful completion of his great undertaking.

¹ On p. 51, col. i f. (b) "debt," Philem. 19 (Boh.), Sap. xv, 16 (Sah.) might be quoted; and "ought" followed by verb. Gal. 5/2.

² Under **εωκ** on p. 29, col. ii, is a misprint, *i.e.* Ps for PS—the first reference to p. 8 might have been quoted as it is a strange use and not a cognate accusative as is that on p. 286 referred to. The words are "thy ministry" (διακονία) **πτακεωκ μμοc** "on which thou didst go."

³ So common a construction as *e.g.* "will make you fishers of men" (Mt. iv, 19) seems to have been overlooked.

HERBERT THOMPSON.

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